



# **Highways and Minor Ports Department**

**Policy Note  
2013 - 2014**

**Demand No. 21**

**Edappadi K. Palaniswami**  
Minister for Highways and Minor Ports

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GOVERNMENT OF TAMIL NADU  
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## TABLE OF CONTENTS

CHAPTER	TITLE	PAGE NO
1	Introduction	1
2	Office of the Director General	41
3	Construction and Maintenance	53
4	NABARD and Rural Roads	95
5	Projects	127
6	Metro	159
7	National Highways	193
8	Quality Assurance and Research	219
9	Planning, Designs and Investigation	231
10	Tamil Nadu Road Infrastructure Development Corporation	255
11	Tamil Nadu Road Sector Project	263
12	Tamil Nadu Road Development Company Ltd	291
13	Tamil Nadu Maritime Board	321
14	Poompuhar Shipping Corporation Ltd	359
15	Conclusion	371



# **HIGHWAYS AND MINOR PORTS DEPARTMENT**

## **Policy Note - 2013-2014**

### **1. Introduction**

On 17.03.2012, the Hon'ble Chief Minister released the **Vision 2023** document, which envisages a strategic plan for the comprehensive development of Infrastructure in the State.

As far as the Highways and Minor Ports Department is concerned, this far-sighted and visionary document emphasizes the enhancement of 2000 km of roads into six and eight lane Expressway Corridors; the modernization of State Highways covering 5000 km of four lane highways and the conversion of 16,000 km of Other State Highways to two lane roads

with paved shoulders, at a proposed investment of Rs.1,33,000 Crore.

It further contemplates the development of three large Greenfield Ports and five Minor Ports with an incremental aggregate capacity of 150 million tones to handle dry bulk; imported and domestic coal for power generation, liquid cargo and containerized cargo, at a proposed investment of Rs.15,000 Crore.

These projections form the Mission Statement of this Department and are the basic templates on which its road-map for 2013-2014 has been crafted.

### **1.1 A History of Highways:**

The oldest constructed roads discovered to date are in former Mesopotamia, now known as Iraq. These stone paved streets date back to about

4000 B.C in the Mesopotamian cities of Ur and Babylon.

The Roman Empire was famous for its roads, some of which exist to this day, nearly 2000 years after they were made. These roads were famed for being straight and well made.

The Appian Way was one of the earliest and strategically most important Roman roads, which connected Rome to Brindisi in South East Italy.

It is incredible to know that some of the major highways of the world were constructed in the ancient times. These are widely spread among various countries and some have historical stories behind their existence.

Some of the ancient highways are

- a. **The Nakasendo Highway in Japan**, which links 17<sup>th</sup> century Kyoto with modern Tokyo is 310 miles long.
- b. **The Khmer Highway in Thailand**, which stretches from Angkor in Cambodia to Phimai in Thailand, covering a distance of 140 miles.
- c. Russia is connected with Italy through a highway called the **Amber Road**. Stretching from St. Petersburg, it goes through Central and Eastern Europe, finally meeting Venice.
- d. The old **North Trail** in America stretches almost 2000 miles from Canada to Mexico. The Americans later called the road, Rockies.

Two Scottish engineers, **Thomas Telford** and **John Loudon McAdam** are credited with the first modern roads. They also designed the system of raising the foundation of the road in the centre for easy water drainage.

Telford improved road building further by analyzing stone thickness, road traffic, road alignment and gradient slopes.

McAdam, born in 1756, designed roads with harder surfaces, using broken stones placed in symmetrical, tight patterns and covered with smaller stones. His design was called "**Macadam**" after his name and was a huge achievement in road construction in the 1800s.

This design led to the bitumen-based binding called Tarmacadam. The famous Champs-Elysee in Paris was the



first modern road in Europe. Pennsylvania Avenue in Washington D.C. was the first asphalt road in the United States of America.

Today, most of our roadways are paved with asphalt concrete. This, in effect, is the benchmark in highway applications the world over.

## **1.2 The Global Perspective and the Indian Scenario**

India has a road network of 40,20,000 km as in 2012, the third longest in the world. At 0.66 km of roads per square kilometre of land, the quantitative density of the country's road network is similar to that of the United States (0.65) and far higher than that of China (0.16) or Brazil (0.20).

However, qualitatively, India's roads are a mix of modern highways and narrow, unpaved roads and are undergoing drastic improvement. As of 2008, 49% - about 2.1 million km of Indian roads were paved.

Adjusted for its large population, India has less than 4 km of roads per 1000 people, including all its paved and unpaved roads. In terms of quality, all season, 4 or more lane highways, India has less than 0.07 km of highways per 1000 people, as of 2010. These are some of the lowest road and highway densities in the world. For context, the United States of America has 21 km of roads per 1000 people, while France has about 15 km for 1000 people - predominantly paved and high quality in both cases.

In the past, the country did not allocate enough resources to build or

maintain its road network. This has changed since 1995, with major efforts currently underway to modernize the country's road infrastructure.

As of December 2012, India had completed and placed in use, over 19,200 km or recently built 4 or 6 lane highways connecting many of its major manufacturing centers, commercial and cultural hubs.

The momentum of new highway construction across India has accelerated in recent years. As of October 2011, the country was adding 11 km of new highways on an average every day.

The expected pace of project initiations and completion suggests that India would add about 600 km of modern highways per month on an average, through 2014.

According to 2009 estimates by Goldman Sachs, India will need to invest US\$ 1.7 trillion on infrastructure projects before 2020 to meet its economic needs, a part which would be in upgrading its road network.

### **1.3 The Highways Department in Tamil Nadu**

Government of Tamil Nadu had the unique distinction of creating a separate Highways Department as early as in 1946 exclusively to attend to roads and bridges in the State. It was a part of the Public Works Department earlier but is now a separate and distinct department. A new post of Secretary to Government, Highways Department was created in 1996.

The objectives of the Department are maintaining and improving the roads under the control of the Government and to

provide all weather road connectivity to rural habitations. Tamil Nadu was the forerunner in bringing out standard specifications for roads and bridges in the year 1954. The Department is also in charge of improvement and maintenance of the National Highways in the State. Minor Ports were later brought under the purview of this Department. Subsequently, this Department was renamed as Highways and Minor Ports Department.

### **1.3.1 Categories of Roads**

<b>Category of roads</b>	<b>Length (km)</b>
National Highways (NH)	4,974
State Highways (SH)	10,764
Major District Roads (MDR)	11,247
Other District Roads (ODR)	35,032
<b>Total</b>	<b>62,017</b>

### **1.3.2 This Department comprises of**

- a.Highways Department
- b.The Tamil Nadu Road Sector Project
- c.The Tamil Nadu Road Development Company
- d.The Tamil Nadu Road Infrastructure Development Corporation
- e.The Tamil Nadu Maritime Board
- f. The Poompuhar Shipping Corporation

The following wings constitute the Highways Department:

- a.The Office of the Director General
- b.Construction and Maintenance
- c.NABARD and Rural Roads
- d.National Highways
- e.Projects
- f. Metro
- g.Planning, Design and Investigation
- h.Quality Assurance and Research

## **1.4 Significant Initiatives taken by the Department**

The original scope of work with regard to the construction of a Grade Separator on the Periyar E.V.R.Salai, connecting the Nelson Manickam Road and the Anna Nagar-III Avenue at Aminjikai in Chennai, for which Administrative Sanction was issued on 18.11.2010, envisaged the dismantling and shifting of the Perarignar Anna Platinum Jubilee Memorial Arch.

This historic and landmark structure was inaugurated by the former Chief Minister Dr.M.G.Ramachandran on 01.01.1986. While efforts were being made to dismantle the arch, the Hon'ble Chief Minister, on 05.09.2012, issued unequivocal and explicit instructions to the effect that the "Anna Memorial Arch" would

not be shifted and would remain at its present location.

The Hon'ble Chief Minister also directed the Highways Department to suitably alter the alignment of the Grade Separator so as to ensure the positional integrity of the structure.

On 24.09.2012, the Hon'ble Chief Minister issued categorical instructions to the effect that "**In-Situ Repair**" of the Arch be carried out and completed in 120 days. Further, the Hon'ble Chief Minister inspected the site on 26.09.2012 and directed that utmost care and caution be exercised while carrying out the repair and restoration work. The Hon'ble Chief Minister further emphasized the need to meticulously ensure that the architectural and structural integrity of the arch be



maintained at all costs and instructed the Department to commence the restoration work immediately.

The Department started the work on 26.09.2012 and completed the restoration by 29.12.2012 ensuring that it was opened to traffic on 04.01.2013, thereby complying with the directive of the Hon'ble Chief Minister.

The premier body of Highways Engineers in the country, the Indian Roads Congress held its 73<sup>rd</sup> Annual Session at Coimbatore from 7<sup>th</sup> of January to 11<sup>th</sup> January 2013. The above session was hosted by the Government of Tamil Nadu which sanctioned a sum of Rs.3.31 Crore towards this annual event. The five day session was attended by more than 2500 delegates from the country and abroad. It

included a technical exhibition and a technical forum in which several research papers and case-studies were presented.

There were panel discussions on current topics of Highway Engineering, by eminent engineers and experts. It was a matter of immense pride for the State Highways Department to have hosted this session in Tamil Nadu.

M/s. L&T Ship Building Company Ltd, a Joint Venture Company of the Tamil Nadu Industrial Development Corporation (TIDCO) and M/s. L&T., Mumbai have established an integrated Shipyard cum Minor Port at Kattupalli in Tiruvallur District and completed the construction of Port facilities. The Tamil Nadu Maritime Board acceded to the request of the company to grant permission to commence commercial operations at Kattupalli Port on 06.12.2012, which was communicated on 27.12.2012.

This port was inaugurated by the Hon'ble Chief Minister on 30.01.2013.

The new office building for the Tamil Nadu Maritime Board at Greenways Road, Adyar, under construction at a cost of Rs.14.90 Crore is nearing completion and is likely to be ready for occupation by the end of April 2013. The offices of the Tamil Nadu Maritime Board, the Tamil Nadu Road Sector Project and the Tamil Nadu Road Development Company will function from this building.

From the revenues of the Tamil Nadu Maritime Board, an amount of Rs.5,09,82,313/- being the share of the Government was handed over to the Hon'ble Chief Minister by the Hon'ble Minister for Highways and Minor Ports on 22.11.2012.

With consistent and sustained follow up, the Department has obtained the

approval of the World Bank and the Government of India for the second Phase of the Tamil Nadu Road Sector Project (TNRSP). This project would be the biggest externally aided project implemented by the State so far, at a total cost of Rs.8583 Crore and covering 1678 km. The project will improve and develop road links with high density traffic. These works will commence from 2013-2014.

The approval of the Ministry of Road Transport and Highways (MoRTH), Government of India was obtained on 05.06.2012, subsequently followed up by the approval of the Department of Economic Affairs on 31.08.2012. The World Bank gave its "**In-Principle Approval**" on 09.10.2012.

The Hon'ble Chief Minister sanctioned an amount of Rs.65 Crore from the Project Preparatory Fund Component of

the Tamil Nadu Infrastructure Development Board funds in its first meeting held on 04.02.2013.

Consequently, the Request of Expression of Interest (REOI) was published on 15.02.2013 and the final Detailed Project Report (DPR) will be ready for execution of work by 15.05.2014. It is expected that the loan agreement with the World Bank will be executed by 30.06.2014.

A concerted effort was made to fast track the ongoing works on the first phase of the Chennai Outer Ring Road (ORR) project. Long pending litigation was expeditiously settled and several issues connected with the Tamil Nadu Electricity Board (TNEB) amicably resolved. Apart from this, critical MoU's (Memoranda of Understanding) were signed with NHA

(National Highways Authority of India) and the Indian Railways on 21.11.2012 and 31.12.2012 respectively. Consequent to these pro-active measures, the TNRDC was able to facilitate the pace of work on the project.

This vital corridor connecting Vandalur on NH-45 to Nemilichery on NH-205 via Nazarathpet on NH-4, is expected to be completed by December 2013 and will be a crucial link in the overall transport connectivity of Greater Chennai.

A conscious effort was made by the Tamil Nadu Road Infrastructure Development Corporation (TNRIDC) to remove the bottlenecks which had delayed the progress of work on the Oragadam Industrial Corridor Project.

This is a critical project which involves the four laning of SH-57 from Singaperumalkoil to Sriperumpudur for a distance of 24.60 km and the four laning of SH-48 from Vandalur to Walajabad, to a length of 33.40 km. It also includes the construction of a Grade Separator at Oragadam junction.

The Right Hand Side (RHS) of the Grade Separator was opened for traffic on 11.02.2013. The remaining work on the structure is expected to be completed by June 2013.

Acquisition of forest land of 5 km involving an extent of 20.81 hectares was held up for several years, as a result of inter departmental delays. Three stretches covering a length of 3.5 km on the Singaperumalkoil – Sriperumpudur stretch

of the corridor in the revenue villages on Kolathur, Appur and Vadakupattu and another stretch of 1.5 km on the Vandalur-Walajabad road in Vattambakkam village are involved. This proposal had been pending from July 2008.

The Department, after sustained liaison and co-ordination with the Environment and Forests Department ensured that officials from the Regional Office (Southern Zone) of the Ministry of Environment and Forests, Government of India at Bengaluru took up detailed field inspections of the sites involved and the necessary approvals were obtained in the State Advisory Group meeting held in Chennai on 26.03.2013. The Stage-I Clearance has now been obtained and work



on these critical and vital gaps in the projects will commence immediately.

TNRIDC will also take up the six laning of the 12 km stretch from Oragadam to Sriperumpudur expeditiously. The Administrative Sanction for this item of work has been given for Rs.86.65 Crore, and tenders have been called for on 30.01.2013. The tender evaluation is now in progress.

As a result of close co-ordination with the NHAI and the Tiruvallur District Administration, several issues with regard to the payment of compensation for structures on the TPP Road (Tiruvotriyur-Ponnery-Panchetti Road), a component of the EMRIP (Ennore-Manali Road Improvement Project) were resolved. Further, as a follow up to the explicit

instructions of the Hon'ble Chief Minister in the review of the Department on 05.03.2013, the issues concerning Project Affected Families (PAFs) at two locations on the Ennore Expressway are also being pro-actively pursued by the Department, thereby facilitating the early completion of this vital project. The co-operation of the TNSCB (Tamil Nadu Slum Clearance Board) and the Corporation of Chennai have also been enlisted in the matter.

The Highways Department has accessed an amount of Rs.278.94 Crore on 26.12.2012 under the Bharat Nirman Phase-III Programme of the Ministry of Rural Development, Government of India for the current year. Upgradation of Rural Roads included in the Core Network are being taken up under the scheme, for which the Rural Development and

Panchayat Raj Department has issued orders in its G.O.(D) No.116, dated 19.03.2013. These works will be taken up and completed in 2013-2014.

On 09.10.2012, the Hon'ble Chief Minister inaugurated 26 bridges constructed at a cost of Rs. 181.52 Crore, two bypasses to a value of Rs.15.90 Crore and six buildings worth Rs.2.44 Crore.

Some of the important works inaugurated were,

- a. Railway Over Bridge - Rs.23.37 Crore  
at Gummidipoondi,  
Tiruvallur District
- b. Railway Over Bridge - Rs.14.00 Crore  
at Pallavaram in  
Kanchipuram District
- c. Railway Over Bridge - Rs.18.44 Crore  
at Thanjavur

- d. High Level Bridge - Rs.12 Crore  
across the Vaigai  
river at Madurai
- e. High Level Bridge Rs.8.40 Crore  
across Uppanar at  
Nochikadu,  
Cuddalore District.
- f. Perambalur Bypass - Rs.12.40 Crore  
Road

On 30.01.2013, the Hon'ble Chief Minister inaugurated 15 bridges constructed at a cost of Rs.104.78 Crore, one bypass to a value of Rs. 2 Crore and six buildings worth Rs.1.97 Crore.

Some of the important works inaugurated were,

- a. Railway Over Bridge - Rs.22.50 Crore  
at Pakkam in  
Kanchipuram District

- b. The Thiru.Vi.Ka Bridge - Rs.15.64 Crore  
at Adyar, Chennai
- c. High Level Bridge at - Rs. 9.80 Crore  
Thiruvakarai,  
Villupuram District
- d. Bridge connecting - Rs.21.30 Crore  
Keezhamanakudi and  
Melamanakudi  
Villages in  
Kanniyakumari  
District

A new Ferry, M.L.Vivekanandha costing Rs. 1.08 Crore for the Ferry service to the Vivekanandha Rock Memorial has been procured by the Poompuhar Shipping Corporation. The necessary clearances are in the process of being obtained for the vessel and it will be ready for inauguration shortly.

## **1.5 Road Map for 2013-2014**

After the review of the Highways and Minor Ports Department on 05.03.2013, the Hon'ble Chief Minister had indicated a series of decisive and categorical policy parameters, which would form the blue-print for the Department's Road Map for 2013-2014.

The Hon'ble Chief Minister issued explicit instructions to the Department to liaise closely with NHAI and Indian Railways. Apart from this, the Department was directed to follow up Land Acquisition matters expeditiously with the Revenue Department and closely monitor all pending litigation. Further, the Hon'ble Chief Minister directed the Highways Department, to ensure adequate co-ordination with the Environment and Forests Department, so as

to facilitate the necessary forest clearances, the Police Department for traffic diversions and the TNEB (Tamil Nadu Electricity Board), TWAD Board (Tamil Nadu Water supply and Drainage Board) and CMWSSB (Chennai Metropolitan Water Supply and Sewerage Board) with regard to the shifting of utilities.

As far as the Department's flagship CRIDP (Comprehensive Road Infrastructure Development Programme) 2013-2014 was concerned, the Hon'ble Chief Minister directed that priority should be accorded for taking up of works in backward districts.

It was brought to the notice of the Hon'ble Chief Minister during the course of the departmental review that, consequent to the construction of bypasses by the NHAI for several towns, the original stretches had been abandoned and there was a necessity

to have them reclassified as urban State Highways roads and take up immediate maintenance works.

It was also indicated that there was at present, 11 such abandoned stretches, to a length of 81.27 km as delineated:

<b>S. No</b>	<b>Name of Road</b>	<b>Village/ Town</b>	<b>Length in km</b>	<b>Permanent Restoration (Rs.in lakh)</b>
<b>Tiruchirappalli (C&amp;M) Division</b>				
1.	Nagapattinam-Gudalur-Mysore road NH-67	Tiruchirappalli – Karur section	11.000	1200.00
2.	Chennai-Tiruchirappalli-Dindigul road NH-45	Tiruchirappalli-Dindigul section	8.000	800.00
<b>Tirunelveli (C&amp;M) Division</b>				
3.	Madurai-Kanniyakumari road NH-7	Thalaiyuthu	0.800	50.00
<b>Pudukottai (C&amp;M) Division</b>				
4.	Tiruchirappalli-Ramanathapuram road NH-210	Keeranur	4.400	450.00
5.	Tiruchirappalli-Ramanathapuram road NH-210	Pudukottai	14.250	1200.00



<b>S. No</b>	<b>Name of Road</b>	<b>Village/ Town</b>	<b>Length in km</b>	<b>Permanent Restoration (Rs.in lakh)</b>
6.	Tiruchirappalli-Ramanathapuram road NH-210	Thirumayam	2.900	238.00
<b>Sivagangai C&amp;M Division</b>				
7.	Tiruchirappalli-Ramanathapuram road NH-210	Karaikudi	17.600	770.00
<b>Thiruvannamalai C&amp;M Division</b>				
8.	Puducherry-Krishnagiri road NH-66	Kilpennathur	2.720	550.00
9.	Puducherry-Krishnagiri road NH-66	Thiruvannamalai	10.060	2200.00
10	Puducherry-Krishnagiri road NH-66	Chengam	5.300	325.00
<b>Tirupur C&amp;M Division</b>				
11	Salem-Cochin road NH-47	Permanallur	4.240	450.00
<b>Total</b>			<b>81.270</b>	<b>8233.00</b>

It was also informed to the Hon'ble Chief Minister that it was necessary to take up permanent restoration of all these abandoned roads as an immediate one time

measure. The Hon'ble Chief Minister directed that this be done immediately.

Further, the Hon'ble Chief Minister directed that these roads be taken up for permanent restoration at an approximate cost of Rs.82.33 Crore under the CRIDP (Comprehensive Road Infrastructure Development Programme) for 2013-2014.

Consequently, in G.O.Ms.No.38, Highways and Minor Ports (HV1) Department, dated 22.03.2013, orders have been issued for the taking over of all these stretches and declaring them as State Urban Highways.

Further, it was brought to the notice of the Hon'ble Chief Minister that the following roads in Tamil Nadu were declared as National Highways and were entrusted to NHAI as indicated:

<b>S. No</b>	<b>Name</b>	<b>Date of declaration as National Highways</b>	<b>Date of entrustment to NHA I</b>
1.	Kerala / Tamil Nadu Border -Kanyakumari (NH-47)	10.04.1958	27.09.2005
2.	Nagapattinam-Thanjavur Section (NH-67)	09.02.1998	27.09.2005
3a.	Coimbatore (Narasimmanaicken palayam) Mettupalayam (Kallar) (NH-67)	25.02.2004	27.09.2005
3b.	Mettupalayam-Ooty-Gudalur-Tamil Nadu/Karnataka Border (NH-67)	25.02.2004	27.09.2005
4.	Vikravandi-Kumbakonam-Thanjavur Section (NH-45C)	25.02.2004	06.12.2005
5.	Thanjavur-Manamadurai Section (NH-226)	31.05.2006	06.12.2006
6.	Trichy-Chidambaram (NH-227)	31.05.2006	06.12.2006
7.	The 22 km. Padi-Thirunindravur stretch of the Padi-Tirupati NH-205	06.01.1999	27.09.2005

It was mentioned that in spite of nearly 8 years having passed after handing over these roads to NHAI, permanent road improvement works could not be taken up because these roads were not viable on the BOT (Build, Operate and Transfer) matrix stipulated by NHAI. Hence, NHAI could not find concessionaires to execute these works. Therefore, these roads had not been appropriately maintained, leading to severe public criticism.

On being appraised of this issue, the Hon'ble Chief Minister directed that, as an immediate measure, temporary restoration work on these roads be taken up urgently, so as to ameliorate the difficulties being experienced by the public.

The Chief General Manager, National Highways Authority of India, Chennai had indicated the status of maintenance and

original works on the seven National Highways hereunder:

S. No	Name	Maintenance Amount sanctioned/ to be sanctioned by Ministry (Rs.in lakhs)	Status of maintenance works	Status of original works (4 laning)
1.	Nagapattinam Thanjavur Section <b>NH-67</b>	1079.00	Lowest Bid received on 19.02.13. Maintenance works are in progress	Approval from Public Private Partnership Approval Committee (PPPAC) yet to be obtained
2.	Coimbatore (Narasimmanaiackalpalayam Kangeyampalayam) – Mettupalayam Section <b>NH-67 Extn</b>	57.79	Bids invited on 13.02.13. Last date for receipt of bid 28.02.13.	Letter of Award for 4 laning issued on 17.07.12. Concession agreement to be signed.
3.	Mettupalayam -Ooty- Gudalur – TamilNadu/ Karnataka Border <b>NH-67 Extn</b>	1960.00	Financial bids opened on 30.01.2013 and under scrutiny.	Feasibility study in progress.

S. No	Name	Maintenance Amount sanctioned/ to be sanctioned by Ministry (Rs.in lakhs)	Status of maintenance works	Status of original works (4 laning)
4.	Kerala / Tamil Nadu Border – Kanyakumari <b>NH-47</b>	1457.00	Estimate yet to be sanctioned by the Ministry	No response under Build, Operate and Transfer (BOT) hence modified Public Private Partnership Approval proposal under finalization.
5.	Vikravandi-Kumbakonam Thanjanur Section <b>NH-45C</b>	1034.75	Main-tenance estimate to be sanctioned by the Ministry.	No response for request for proposals even in the extended period up to 25.04.12
6.	Thanjavur-Manamadurai Section <b>NH-226</b>	270.00	Main-tenance estimate to be sanctioned by the Ministry.	Detailed Project Report (DPR) completed. To be implemented under Engineering Project and Construction (EPC) package.

S. No	Name	Maintenance Amount sanctioned/ to be sanctioned by Ministry (Rs.in lakhs)	Status of maintenance works	Status of original works (4 laning)
7.	Trichirappalli-Lalgudi-Chidambaram <b>NH-227</b>	270.00	Main-tenance estimate to be sanctioned by the Ministry.	Detailed Project Report (DPR) completed. Public Private Partnership Approval Committee (PPPAC) approval to be obtained.

It was suggested to the Hon'ble Chief Minister that the only method of resolving this issue was to sanction funds for the immediate temporary repair and restoration of these roads, or to hand over these roads to the State Highways Department for future permanent maintenance.

It was further informed that the following four National Highways were in

very poor condition and warranted immediate restoration works and a sanction of Rs.16.50 Crore was requested for carrying out immediate temporary restoration, as indicated:

<b>SI No</b>	<b>NH No</b>	<b>Name</b>	<b>Maintenance Amount Required (Rs. in crore)</b>
1	45C	Vikkravandi – Kumbakonam Thanjavur section	6.00
2	47	Kerala/Tamil Nadu Border – Kanyakumari	3.50
3	226	Thanjavur – Manamadurai Section	2.00
4	227	Trichy – Lalgudi – Chidamabram	5.00
<b>TOTAL</b>			<b>16.50</b>

The Hon'ble Chief Minister directed the immediate sanction of Rs.16.50 Crore from the Comprehensive Road Infrastructure Development Programme



(CRIDP) in 2013-2014, for these items of work, contingent on this amount being reimbursed by the Ministry of Road, Transport and Highways, Government of India for taking up immediate temporary restoration work of the four National Highways.

The Hon'ble Chief Minister was also informed about the poor maintenance and deterioration of the 22 km stretch from Padi to Thirunindravur of NH-205, which was declared as a National Highway on 06.01.1999 and entrusted to NHAI on 27.09.2005.

It was further informed that NHAI had taken up the four laning of this highway from Tirupathi to Tirunindravur and had unilaterally excluded the 22 km

stretch from Tirunindravur to Padi from the proposal.

Hence, there had been no maintenance works undertaken in this stretch for the past 8 years leading to severe public criticism. The Hon'ble Chief Minister directed that, in view of the public representations regarding the damaged conditions of this stretch of road, the Highways Department may immediately take up temporary restoration works for Rs. 5 Crore and further directed that this stretch of road be declared as a State Urban Highway and measures be initiated for its permanent restoration.

In this context, G.O.Ms.No.34, Highways and Minor Ports (HV1) Department, dated 19.03.2013 has been issued, declaring the stretch of NH 205

from Padi to Tirunindravur as a State Highways Urban Stretch and permanent restoration, widening and strengthening works of this stretch will be taken up under the CRIDP in 2013-2014.

The Hon'ble Chief Minister also directed the Tamil Nadu Maritime Board to examine the feasibility of developing Minor Ports such as Nagapattinam as Joint Ventures with TIDCO (Tamil Nadu Industrial Development Corporation Ltd).

## **2. Office of the Director General**

The Office of the Director General, Highways looks after Administration, Planning and Quality Control along with an Information Technology Cell.

The Director General co-ordinates the works of all the wings of the Highways Department.

### **2.1 Administration:**

The overall responsibility for the establishment and personnel administration matters of all the staffs of this Department lies with the Office of the Director General.

This office is solely responsible for assessment of vacancies in all cadres and for the new recruitments made through the TNPSC.

In addition, direct recruitment for certain posts, as and when vacancies arise due to retirements and promotions are filled up by promotion of eligible candidates after following procedures in accordance with Service Rules.

### **2.1.1 Recruitment:**

In 2012-2013, 34 Assistant Engineers and 155 Assistants were recruited through the TNPSC. 121 candidates have been allotted by the TNPSC for appointment to the post of Junior Assistants and appointment orders have been issued. Appointment orders for 141 Junior Draughting Officer posts have been issued.

### **2.1.2 Committees:**

The Director General is the chairperson of all the Technical

Committees. The following committees have been formed for the effective functioning of this Department:

- **Board of Engineers (BOE)** is the highest technical authority comprising of all the Chief Engineers of the Department and is headed by the Director General for policy decision on technical matters.
- **Commissionerate of Tenders (CoT)** was established to streamline the tender acceptance procedure. The Government has issued orders vide, G.O.(Ms).No.16, Highways and Minor Ports (HN1) Department, dated 11.02.2013 for reconstitution of the Commissionerate of Tenders with the following members :-

1. Director General, Highways & Chairman
2. The Secretary, Finance & Representative
3. The Chief Engineer, Highways, Construction and Maintenance & member
4. The Chief Engineer, Highways, NABARD and Rural Roads & member
5. The Chief Engineers & The Superintending Engineers, who initiate the proposal will also be special invitees.

➤ **Revised Administrative Sanction Committee (RAC)** comprises of the representatives of Government in the Finance and Highways Departments, along with three retired Chief Engineers from this department for processing and early approval of RAS proposals.

## **2.2 Information Technology Cell:**

The Information Technology Cell has been formed in October, 2012 under the control of the Director General for maintaining the IT initiatives and is functioning at the Highways Research Station campus.

The Hon'ble Chief Minister had launched the ***e-pathai*** (Electronic-Project, Administration, Traffic, Highway Assets and Information Management System) software with Geographical Information System (GIS), Project, Human resources & Finance Management System (P&FMS) and Road Management System (RMS) on 19.06.2012.

The IT Cell is monitoring the following software systems under the e-pathai, developed for the effective functioning of the Department.



### **2.2.1 Road Management System (RMS):**

The Road Management System (RMS) is a computerized web enabled system developed by the Highways Department to scientifically manage the maintenance of roads and prioritization of roads to be improved from the core network of roads in Tamil Nadu.

The RMS will enhance the capabilities of the Highways Department by providing a readily accessible source of correct and relevant information on the road system as well as providing analytical tools to take up improvement works based on scientific decision making.

The field related data required for analysis are being collected using four Road Measurement Data Acquisition Systems (ROMDAS).

### **2.2.2 Project, Human Resource and Finance Management System (P&FMS)**

The Integrated Project, Human Resource & Finance Management System (P&FMS) aims at statewide computerization to automate the existing manual procedures and processes followed for Project Management, Financial Management and Employee Record Systems for improved communication, data management, project monitoring and office management. Using the P&FMS software, upto date digital databases for Project Management, Financial Management and Employee Record Systems would be created.

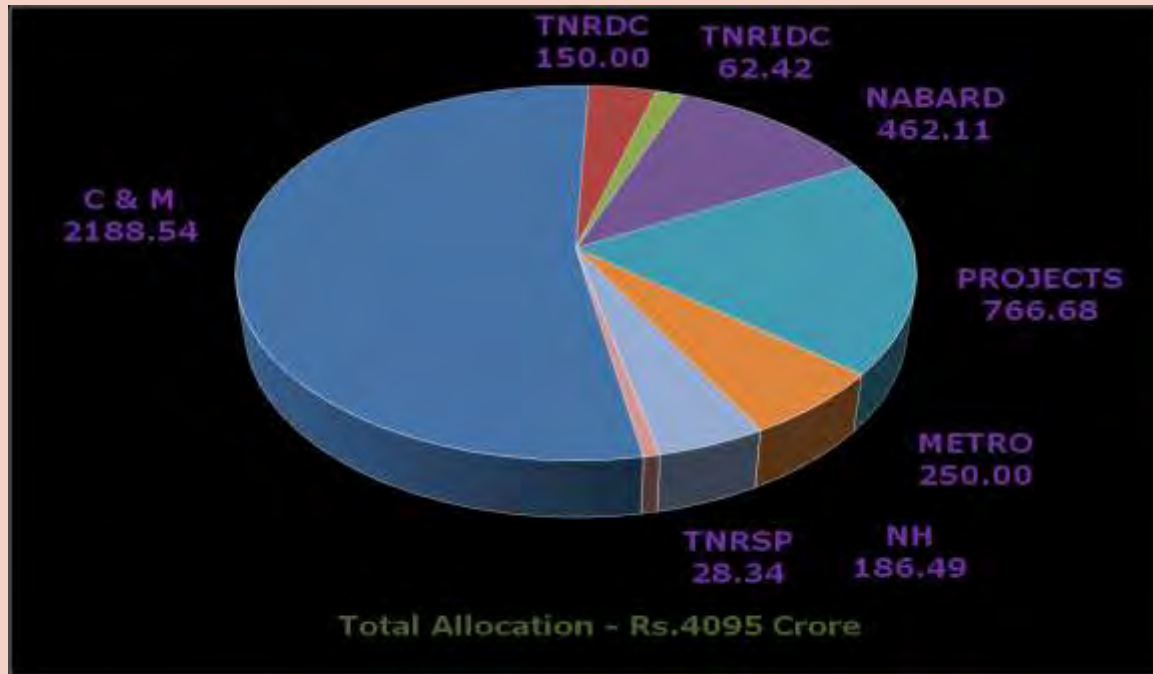
All the data related to important projects are being digitized and made available in the system in electronic formats. Also, establishment related

particulars will be stored in the data base. This will ensure efficient and transparent functioning of the Department.

### **2.2.3 Geographic Information System (GIS)**

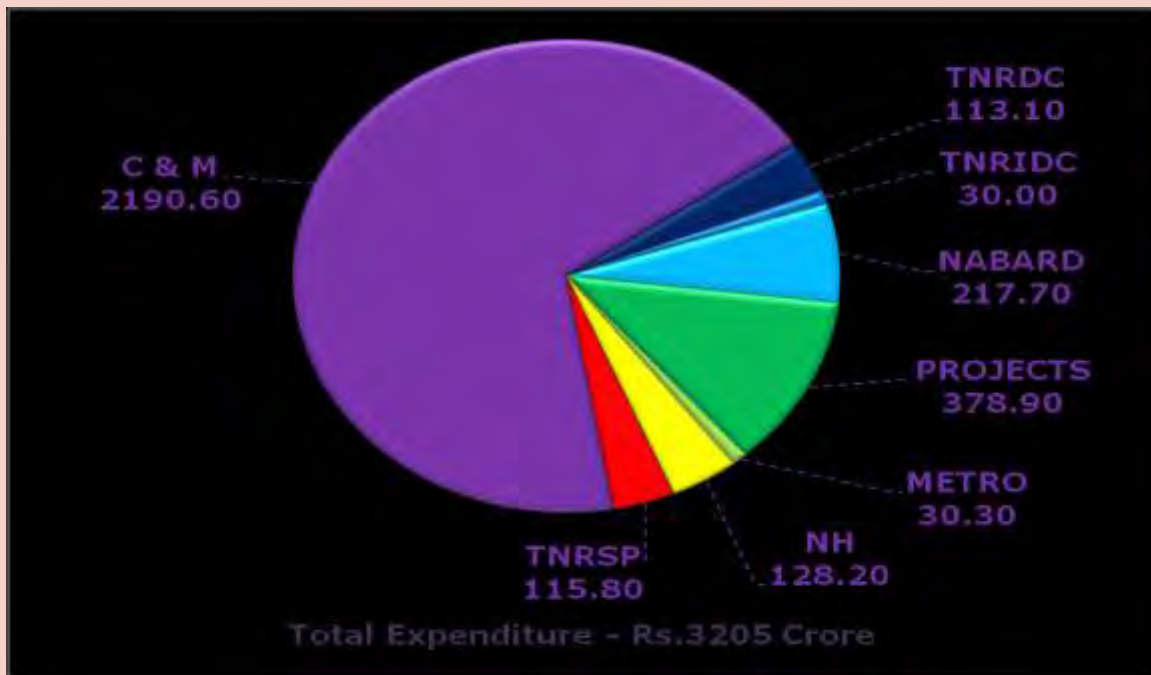
GIS software has been developed to effectively prioritize the road works using a computerized system suitable for operating on a GIS platform, thereby enabling policy makers of the Department to utilize the resources optimally.

The GIS software is web based and interfaced with applications such as RMS and P&FMS for representing Road and Bridge Information System in a schematic way. It will assist the Highways Department in planning various schemes and allocation of funds. The GIS software has been customized and developed based on the latest map of the Survey of India.



Budget Allocation for Plan Works, 2013-2014





Expenditure for Plan Works, 2012-2013



### **3. Construction and Maintenance**

This wing of the Highways Department undertakes major infrastructure projects like the strengthening and improvements of roads, construction of bridges, Railway Over Bridges and formation of bypasses. A total length of 57,043 km of Government Roads is under the control of this wing, which functions with eight circles and thirty eight divisions.

The schemes undertaken by this wing are as follows:

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

This is the flagship scheme of the Government, in which widening of all intermediate lane State Highways (SH) to double lane; widening of single lane Major



District Roads (MDR) progressively to intermediate lane and widening of Other District Roads (ODR) with heavy traffic intensity from single lane to intermediate lane are being taken up. In addition, construction of Bridges and Culverts, formation of Bypasses and protective works such as Drains, Retaining walls and Centre medians are also taken up.

In 2012-2013, Government sanctioned new works worth Rs.2262.50 Crore for widening and improvements to 4943 km of roads, construction of 188 bridges, culverts and protective works under this scheme. These include the widening of 248 km of Intermediate Lane State Highways to Double Lane and 895 km Single Lane Major District Roads to Intermediate Lane roads.

### **3.1.1 CRIDP - State Highways**

In 2012-2013, spillover works of widening and improvements to 731 km of roads and 70 bridges and culverts have been taken up at a cost of Rs.754 Crore.

New works for widening and improvements to 1305 km of roads, 27 bridges and culverts and 24 protective works at a cost of Rs.903.80 Crore have been sanctioned. These include widening of 248 km of Intermediate Lane roads to Double Lane roads at a cost of Rs.149.45 Crore.

In 2012-2013, widening and improvements of 1236 km roads and construction of 57 bridges and culverts have been completed at an expenditure of Rs.796.85 Crore.

## Major works undertaken in CRIDP State Highways

<b>District</b>	<b>Nomenclature</b>	<b>Length in km</b>	<b>Amount in lakhs</b>
Erode	Improvements in Thoppur-Mettur-Bhavani-Erode road (SH 20)	22.48	1973.00
Vellore	Improvements to Walajah - Sholinghur - Arakkonam Road (SH 61)	7.80	525.00
Thoothukudi	Improvements to Thoothukudi-Tiruchendur-Kanniyakumari Road (SH 176)	9.80	460.00
Villupuram	Widening Double Lane Road to Multi Lane Road and strengthening to Thiruvanmiyur - Mamallapuram - Marakkanam-Pondicherry road (SH 49).	4.76	450.00

<b>District</b>	<b>Nomenclature</b>	<b>Length in km</b>	<b>Amount in lakhs</b>
Dharmapuri	Widening and Improvements in old NH-7 including Cross Drainage Works and Protective works (SHU 129)	7.75	945.00
Chennai	Forming World class standard Arterial Roads in Chennai - Inner Ring Road - Phase - I (SH-2)	4.60	1650.00

Under this scheme, a budget provision of Rs.850.47 Crore has been made for the year 2013-2014.

### **3.1.2 CRIDP - Major District Roads:**

In 2012-2013, Spillover works of widening and improvements to 944 km of roads and construction of 33 bridges and culverts have been taken up at a cost of Rs.382 Crore.

New works for widening and improvements to 1588 km roads, 22 bridges and culverts and 15 protective works at a cost of Rs.818.72 Crore have been sanctioned. These include widening of 895 km of Single Lane roads to Intermediate Lane roads at a cost of Rs. 456.43 Crore.

In 2012-2013, widening and improvements in 1582 km of roads and 55 bridges and culverts have been completed at an expenditure of Rs.593.75 Crore.

**Major works undertaken in CRIDP  
Major District Roads**

<b>District</b>	<b>Nomenclature</b>	<b>Length in km</b>	<b>Amount in lakhs</b>
Kanchipuram	Widening the existing two lane road to four lane and strengthening of Poonamallee - Kundrathur Road	3.00	625.00
Tiruvannamalai	Widening from Single Lane road to Intermediate Lane road & improvements to Vilangadu road	15.20	900.00
Villupuram	Widening from Single Lane road to Intermediate Lane road and Strengthening of Thiyagadurgam - Adari Road	18.20	775.00

<b>District</b>	<b>Nomenclature</b>	<b>Length in km</b>	<b>Amount in lakhs</b>
Thanjavur	Widening from Single Lane road to Intermediate Lane road and Strengthening of Kumbakonam – Kollidam river bank road including a minor bridge	7.15	750.00
Villupuram	Widening from Single Lane road to Intermediate Lane road and Strengthening of M.Kunnathur-Naripalayam road.	14.00	640.00

Under this scheme, a budget provision of Rs.637.85 Crore has been made for the year 2013-2014.

### **3.1.3 CRIDP - Other District Roads:**

In 2012-2013, Spill over works of widening and improvements to 321 km of roads and construction of 52 bridges and

culverts were taken up at a cost of Rs.46 Crore.

New works for widening and improvements to 763 km of roads, 36 bridges and culverts and 22 protective works at a cost of Rs.224.02 Crore have been sanctioned.

In 2012-2013, widening and improvements to 642 km of roads and 68 bridges and culverts have been completed at an expenditure of Rs.199.40 Crore.



## Major works undertaken on Other District Roads

<b>District</b>	<b>Nomenclature</b>	<b>Length in km</b>	<b>Amount in lakhs</b>
Villupuram	Widening Single Lane road to Intermediate Lane road & improvements to Morattandy-Bommiyarpalayam road.	9.00	460.00
Coimbatore	Widening from Single Lane road to Intermediate Lane road and improvements of the Perur - Vedapatti road.	5.20	280.00
Udhagai	Widening from Single Lane road to Intermediate Lane road and improvements of the Ketti Palada Selas Road including construction of Protective walls and Cement Concrete Drains.	7.40	390.00

<b>District</b>	<b>Nomenclature</b>	<b>Length in km</b>	<b>Amount in lakhs</b>
Dindigul	Widening from Single Lane to Intermediate Lane and Strengthening and providing paving blocks for berms including the construction of culverts in Parali - Reddiapatti road.	4.51	299.00
Ramana thapuram	Widening and Improvements from Single Lane road to Intermediate Lane road of Neeravi - Keezhamudi-Mannarkottai Road	3.40	281.00

Under this scheme, a budget provision of Rs.228.78 Crore has been made for the year 2013-2014.

### **3.1.4 CRIDP - Other District Roads - Special Component Plan**

In 2012-2013, Spillover works of widening and improvements to 646 km of

roads and construction of 53 bridges and culverts were taken up at a cost of Rs.112 Crore.

New works for widening and improvements to 1286 km roads, 29 bridges and culverts and 13 protective works at a cost of Rs.315.95 Crore have been sanctioned.

In 2012-2013, widening and improvements to 1166 km roads and 49 bridges and culverts have been completed at an expenditure of Rs.315 Crore.

### **Major works undertaken in the CRIDP Special Component Plan**

<b>District</b>	<b>Nomenclature</b>	<b>Length in km</b>	<b>Amount in lakhs</b>
Thoothukudi	Widening Single Lane Road to Double Lane road and Rebuilding the road in Pottalurani - Sekkarakudi - Perurani - Mangalagiri Road.	5.20	650.00

<b>District</b>	<b>Nomenclature</b>	<b>Length in km</b>	<b>Amount in lakhs</b>
Thanjavur	Widening from Single Lane road to Intermediate Lane road and Rebuilding of Manalur-Veeramangudy-Someswarapuram Road.	2.60	440.00
Tiruvarur	Widening from Single lane to Intermediate lane in Mannargudi - Moovanallur - Vaduvur road	6.00	290.00
Salem	Widening from Single Lane road to Intermediate Lane road and Improvements to the Edappady - Nedungulam Ferry road.	10.40	490.00
Dindigul	Widening from Single lane to Intermediate lane & Strengthening and Rebuilding in the Sirumalai Ghat Road	13.40	670.00

Under this scheme, a budget provision of Rs.315 Crore has been made for the year 2013-2014.

### **3.2 Works taken up under Part II Schemes:**

Under the Part II scheme, Rehabilitation of distressed Bridges, construction of bridges in State Highways, construction of office buildings, purchase of office and laboratory equipments and purchase of software are undertaken.

In 2012-2013, spill over works to a value of Rs.15.36 Crore were taken up for construction. These include 8 bridges and 33 buildings.

During 2012-2013, new works of construction of 3 circle office buildings, 3 division office buildings, 16 subdivisions and 4 section offices and 7 Travellers

bungalows have been sanctioned at a cost of Rs. 8.46 Crore.

In 2012-2013, 6 bridges and 35 buildings have been completed at an expenditure of Rs.12.99 Crore.

Under this scheme, a budget provision of Rs.22.03 Crore has been made for the year 2013-2014.

### **3.3 Tsunami Rehabilitation Programme:**

In 2012-2013, spillover works on 15 bridges at a spill value of Rs.103 crore have been taken up and one bridge has been completed.

During 2012-2013, an expenditure of Rs.29.80 Crore has been incurred under this scheme.

Under this scheme, a budget provision of Rs.31.94 Crore has been made for the year 2013-2014.

### **3.4 Formation of Bypasses:**

Formation of 26 bypasses in various towns has been taken up. The works of formation of bypasses to Pattukottai (phase-I), Dharapuram (phase-I), Perambalur (phase-II), Rasipuram (phase-I), Hosur (phase-II) and Thiruthuraipoondi are in progress.

Land acquisition for the formation of the Thanjavur bypass (Phase-II) is nearing completion. Land Acquisition work for the Sivagangai and Edapady bypasses sanctioned during 2011-12 is in progress.

In 2012-2013, the Government have sanctioned Land Acquisition for forming bypasses to Tharamangalam, Manachanallur, Mannargudi and Tiruttani at a cost of Rs.37.18 Crore.

Further, during 2012-2013, bypasses to Vandavasi, Perambalur (Phase I) and

Dharapuram (Phase II) have been completed.

**Bypasses in various stages:**

1	Completed bypasses	8	1. Cheyyar
			2. Hosur (Phase I)
			3. Ilayankudi
			4. Ettukudi
			5. Thuraiyur
			6. Vandavasi
			7. Perambalur Phase I
			8. Dharapuram (Phase II)
2	Bypasses in progress	6	1. Thiruthuraipoondi
			2. Pattukottai (Phase I)
			3. Perambalur (Phase II)
			4. Dharapuram (Phase I)
			5. Rasipuram (Phase I)
			6. Hosur (Phase II)
3	Land Acquisition in Progress	8	1. Thiruvarur
			2. Thanjavur Phase II
			3. Edappadi
			4. Sivagangai
			5. Tharamangalam
			6. Tiruttani
			7. Manachanallur
			8. Mannargudi



4	Land Acquisition Proposal / Detailed Project Report in progress	4	1. Coimbatore Western Bypass
			2. Thirunelveli Outer Ring Road
			3. Vellore (Phase I)
			4. Tiruvallur

### **3. 5 Road Safety Works:**

Improvement to accident prone areas and black spots are essential to prevent accidents. Road safety works like widening of narrow culverts, improvement to accident prone areas such as widening and reconstruction of narrow bridges, junction improvements and construction of centre medians are being taken up utilizing the road safety funds.

In 2012-2013, 49 spill over works for Rs.22.75 Crore have been taken up for execution. All these works have been completed.

### **3.6 Railway Over Bridges at Railway Level Crossings:**

#### **3.6.1 Railway Works Programme:**

Work on the construction of a Railway Over Bridge in lieu of Level Crossing No. 13 at Athipattu in Thiruvallur District at a cost of Rs.16.40 Crore is in progress and will be completed by July 2014.

#### **3.6.2 Comprehensive Road Infrastructure Development Programme:**

The following two works have been sanctioned in the CRIDP scheme:

- At Coimbatore, work on the construction of approaches to the Railway Over Bridge (Echanari-LC150) at km151/4 of NH209 at a cost of Rs.13 Crore is in progress. It will be completed by June 2014.

- At Sirkazhi, construction of approaches to the Railway Over Bridge (LC 216) in Urban State Highway (at km 128/8 of the NH-45A) at a cost of Rs.12 Crore including culverts and retaining walls is in progress. It will be completed by March 2014.

### **3.7 Performance Based Maintenance Contract:**

In accordance with the announcement made in the Budget of 2011-2012, Government have sanctioned the Performance Based Maintenance Contract of 191.50 km of State Highways at a cost of Rs.121.62 Crore and 185.98 km of Major District Roads in Pollachi division at a cost of Rs.112.31 Crore. The total cost of the project is Rs.233.93 Crore. The Terms

of Reference (TOR) for the entrustment of work are being finalized and it will be commenced soon.

### **3.8 Special Programmes:**

#### **3.8.1 Construction of an integrated office complex for the Highways Department:**

In Highways Department one Director General and seven Chief Engineers Offices are functioning in the state. Many of these offices are functioning in rented buildings in various locations. Hence, the Government have approved to construct a new integrated office complex to accommodate the offices of all the Chief Engineers and the Director General of this Department. The Government have accorded sanction of Rs.13.21 Crore for the construction of an integrated office complex for all the Chief Engineers. Tenders have

been received on 11.03.2013 for this work and they are under scrutiny.

### **3.8.2 Improvement of Roads connecting Tourist Centres:**

The Tourism and Culture Department has sanctioned Rs.10 Crore for the improvement of roads connecting important tourist locations in eleven Districts for 2012-2013, and these works are in the initial stage of implementation.

### **3.8.3 Forming of the Chennai Peripheral Ring Road:**

Chennai City being a fast growing urban sprawl, demands on the existing road network are huge. To address the rapid industrialization and other new developments, alternate connectivity between major ports with industrial clusters and major towns etc. is essential.

The Government have sanctioned Rs.10 Crore for the preparation of a Detailed Project Report for forming the Chennai Peripheral Ring Road connecting Mamallapuram to Ennore port (via) Thiruporur, Singaperumalkoil, Sriperumbudur, Thiruvallur, Thamaraipakkam, Periapalayam, Pudukkottai and Kattupalli to a distance of 162 Km. Formation of the road will be taken up after completion of the Detailed Project Report. Tenders for the preparation of the Detailed Project Report (DPR) have been received on 11.03.2013 and they are under scrutiny.

#### **3.8.4 Forming of Road Grids:**

Work on the Chennai Outer Ring Road (CORR) Project Phase I from Vandalur to Nemilichery is in progress under an Annuity Contract System. It is proposed to

form road grids in the Chennai Outer Ring Road to facilitate development of the region adjoining the road portion.

The proposed corridor of the Chennai Outer Ring Road has a 122 metre Right of Way, which is split into 72 metre for the road and other public transport systems with a 50 metre strip earmarked for commercial purposes.

Since, this is a major orbital corridor for the Chennai Metro region, the traffic emanating on this corridor will have to be provided with a dispersal system. It is necessary to link the orbital corridor with the radial corridors and thus a grid system of road with radial and orbital linkages is essential.

18 numbers of macro grid linkages with the Chennai Outer Ring Road have

been identified and all these links are required to be developed in consonance with the Second Master Plan of CMDA stipulations.

The Government have sanctioned Rs.5.22 Crore for the preparation of a Detailed Project Report for the Development of Road grids along Chennai Outer Ring Road. Tenders for the same will be called soon.

### **3.8.5 Construction of a four lane bridge across the Kollidam River in Tiruchirappalli District:**

To serve the industries located nearer to Tiruchirappalli and for the tourists coming to visit the many tourist attractions in and around Tiruchirappalli, the construction of four lane bridge with footpath across the Kollidam River in Chennai – Trichy – Dindigul Road (SHU9) is



necessary. Preparation of Detailed Project Report is in progress.

### **3.9 Overall Expenditure (2012-2013) and Allocation for 2013-2014:**

In 2012-2013, Widening and Improvements in 4625 km of roads, 3 bypasses and 235 bridges, culverts, protective works and 35 buildings have been completed at an expenditure of Rs.2190.58 Crore in plan works.

For 2013-2014, a total budgetary allocation of Rs.2188.53 Crore has been made under plan schemes.

### **3.10 Non - Plan Maintenance Works:**

In 2012-2013, an allocation of Rs.1029.60 Crore has been made for the maintenance of roads and bridges including the 13<sup>th</sup> Finance Commission grant of Rs.301.64 Crore and provision for the

salary component of the Work Charged Establishment.

Apart from this, an amount of Rs.151.35 Crore has been provided for maintenance of Panchayat Union roads taken up by the Rural Development and Panchayat Raj department out of the Grant-In-Aid recommended by the 13<sup>th</sup> Finance Commission.

During 2012-2013, relaying of 5354 km of roads have been completed at an expenditure of Rs.1040.14 Crore.

Budget provision of Rs.1088.07 Crore has been provided for the current year 2013-2014 including the 13<sup>th</sup> Finance Commission grant.





Ongoing Railway Over Bridge work at Eachanari, Coimbatore.





Perambalur Bypass inaugurated by the Hon'ble Chief Minister on 09.10.2012.





Highways Office Complex at Villupuram inaugurated by the Hon'ble Chief Minister on 09.10.2012.







High Level Bridge across Vaigai at Madurai inaugurated by the Hon'ble Chief Minister on 09.10.2012.





Bridge across Adyar at Nandambakkam, Chennai  
inaugurated by the Hon'ble Chief Minister on 09.10.2012





High Level Bridge at Paagalur, Krishnagiri District  
inaugurated by the Hon'ble Chief Minister on 09.10.2012.





Travellers Bungalow at Edappadi inaugurated by  
the Hon'ble Chief Minister on 30.01.2013.





## **4. NABARD and Rural Roads**

This wing is headed by a Chief Engineer with four Circles and fourteen Divisions. It is entrusted with the construction of bridges and improvements of roads with loan assistance from National Bank of Agriculture and Rural Development (NABARD), construction of Railway Over Bridges, Railway Under Bridges and land acquisition for bypasses.

### **4.1 NABARD Assistance Schemes:**

#### **4.1.1 Construction of River Bridges in Government and Panchayat Union Roads**

Under this scheme, 129 bridges at a cost of Rs 283.52 Crore taken up as spill over works and new works of 121 bridges at a cost of 235 Crore were sanctioned during 2012-2013. A cumulative total of

250 bridges at a cost of Rs 518.52 Crore were taken up for execution.

Of the 121 bridge works sanctioned in 2012-2013, tenders for 95 works have been called for and 24 works are being executed. For the remaining works, estimates are being prepared and tender to be called for shortly. The details of major bridge works are as indicated:

**Major River Bridges sanctioned  
in 2012-2013**

<b>Sl. No</b>	<b>District / Constituency</b>	<b>Nomenclature</b>	<b>Cost Rs. in Lakhs</b>
1	Salem / Mettur	Construction of a High Level Bridge across the Mettur Ellis Surplus Course of the Thoppur-Mettur-Bhavani-Erode road.	2110.00
2	Karur / Krishna rayapuram	Construction of a Bridge across the Amaravathi River connecting Melapalayam to Koyampalli	1243.00

<b>Sl. No</b>	<b>District / Constituency</b>	<b>Nomenclature</b>	<b>Cost Rs. in Lakhs</b>
3	Villupuram / Ulundurpet	Construction of a Bridge at the Virudhachalam - Ulundurpet - Villupuram road across the Gedilam River	1036.00
4	Trichy / Lalgudi	Construction of a Bridge across the Koozhiyar including the formation of a road to connect Thirumangalam and Agalanganallur.	780.00
5	Madurai / Thirumangalam	Construction of a High Level Bridge at the Vathalakundu-Peraiyur-Kariapatti road	727.00
6	Theni / Andipatti	Construction of a High Level Bridge on the Devathanapatti - Varusanadu road (SH - 101)	600.00

In 2012-2013, a total of 64 bridges have been completed incurring an expenditure of Rs 137.18 Crore. The details of completed major bridge works are given:

**Completed Major Bridges  
during 2012-2013**

<b>S. No</b>	<b>District / Constituency</b>	<b>Nomenclature</b>	<b>Cost in lakhs</b>
1	Vellore / Ambur	Construction of a High level bridge in lieu of the causeway on the Ambur - Sathkar road (MDR)	600.00
2	Thiruppur / Dharapuram	Construction of a Bridge on the Peremium-Chellapillai-Goundampudur road across the Amaravathi River including improvements to the road.	538.83
3	Tiruvarur / Tiruvarur	Construction of a High level bridge across the Vettar river on Odachery - Thenodachery road, including improvements to the road.	533.86
4	Tiruvannamalai /Arani	Construction of a High level bridge Kalavai - Vazhaipanthal road (SH- 123)	500.00

<b>S. No</b>	<b>District / Constituency</b>	<b>Nomenclature</b>	<b>Cost in lakhs</b>
5	Erode / Bhavanisagar	Construction of a bridge across the Bhavani river connecting Mudukkandurai - Erankattur road to Ikkarai - Thathapalli - Velliyampalayam road (ODR)	427.54
6	Tirunelveli / Nanguneri	Construction of a High level bridge across Karumeniyar river on the Reddiarpatti - Vijayanarayanam road	427.50
7	Perambalur / Perambalur	Reconstruction of a bridge on the Ranjangudi - V.Kalathur - Kaikalathur road	413.00

For the year 2013-2014, an allotment of Rs.233 Crore has been made.

#### **4.1.2 Improvements to Other District Roads and Major District Roads:**

Under this scheme, spill over works on 11 roads to a length of 49 Km (12.20 Km Strengthening & 36.80 Km Widening) at a cost of Rs 13.32 Crore have been taken up. During 2012-2013, new works on 130 roads to a length of 433.72 Km (318.16 Km Strengthening & 115.56 Km Widening) at a cost of Rs.211.60 Crore were sanctioned.

Of these 130 roads, tenders were called for all the works and 30 works are in progress. The remaining works are to be commenced shortly.

During 2012-2013, 11 roads to a length of 49.00 Km (36.80 Km widening and 12.20 Km strengthening) incurring an

expenditure of Rs 22.84 Crore has been completed.

For this year 2013-2014, an allotment of Rs.191.60 Crore has been made.

#### **4.1.3 Construction of River Bridges on Government roads:**

Under this scheme, spill over works of 7 bridges at a cost of Rs.10.25 Crore were taken up for execution during 2012-2013.

5 bridges were completed incurring an expenditure of Rs 3.19 Crore. The details of 2 ongoing works are given below:



<b>S. No.</b>	<b>District / Constituency</b>	<b>Nomenclature</b>	<b>Cost Rs in Lakhs</b>
1	Kanchipuram/ Thiruporur	Reconstruction of a bridge on the Sadras - Chengalpattu - Kanchipuram - Arakkonam - Tiruttani road	587.40
2	Tiruvallur/ Tiruttani	Construction of a bridge on the Chittoor- Tiruttani-Renigunta road	302.54

For the year 2013-2014, an allotment of Rs.3.71 Crore has been made.

#### **4.1.4 Improvements to Rural Roads:**

Under this scheme, spill over works of 2 bridges at a cost of Rs.3.27 Crore in Panchayat Union Roads have been taken up for execution.

During 2012-2013, one bridge has been completed incurring an expenditure of Rs.0.81 Crore.

The detail of the ongoing bridge work is given below:

S. No.	District / Constituency	Nomenclature	Cost Rs in Lakhs
1	Kanchipuram / Alandur	Construction of a bridge across the Adyar River between Tharapakkam - Anakaputhur	550.67

#### **4.2 Tsunami Rehabilitation Programme**

Under this scheme, spill over works of 2 bridges and 3 roads to a length of 6.20 km at a cost of Rs.28.64 Crore have been taken up for execution. Of the above 2 bridge works, the bridge portions have been completed and work on the approach roads are in progress. For the 3 road works, clearance has been obtained from Forest Department and the works are in execution. These works will be completed by May 2013.

The details of the ongoing bridge and road works are delineated:

<b>S. No.</b>	<b>District / Constituency</b>	<b>Nomenclature</b>	<b>Cost Rs in Lakhs</b>
<b>Bridge works :</b>			
1	Nagapattinam / Sirkazhi	Improvements to Thirumullaivasal-Keela moovarkarai road including construction of a major bridge on the Vellapallam Uppanar river	2750.00
2	Nagapattinam / Poompuhar	Improvements to Kumarakudy - Veppanchery road including construction of a bridge across the Ammanar river	612.00
<b>Road works :</b>			
3	Nagapattinam / Sirkazhi	Improvements to Pazhaiyar - Madhavamedu road.	192.21
4	Nagapattinam / Sirkazhi	Improvements to Madhavamedu - Chinnakottaiyamedu (via Pudupattinam) road.	208.17

<b>S. No.</b>	<b>District / Constituency</b>	<b>Nomenclature</b>	<b>Cost Rs in Lakhs</b>
5	Nagapattinam / Sirkazhi	Improvements to Madhavamedu – Chinnakottaiyamedu (via Thandavankulam) road.	133.47

During 2012-2013, an expenditure of Rs.15.02 crore has been incurred.

For the year 2013-2014, an allotment of Rs.5.41 Crore has been made.

#### **4.3 Construction of Railway Over Bridges/ Railway Under Bridges:**

20 Railway Over Bridges and 5 Railway Under Bridges at a cost of Rs.468.75 Crore in lieu of the existing level crossings have been taken up for execution under the Railway Works Programme. Of these, 6 works are in progress, as indicated:

<b>S. No</b>	<b>District / Constituency</b>	<b>LC No./ Location</b>	<b>Cost in Lakhs</b>
1	Coimbatore / Singanallur	LC 2, Irugur	1869.00
2	Coimbatore / Singanallur	LC 4, Irugur	2116.00
3	Dindigul / Oddanchatram	LC 29, Oddanchatram	1774.00
4	Madurai / Madurai west	LC 366, Palanganatham	3300.00
5	Madurai / Thiruparangundram	LC 371, Thiruparangundram	1830.00
6	Tirunelveli / Tirunelveli	LC 18, Tirunelveli Yard	2912.00

The details of 3 works for which agreements have been executed and are to commence shortly are:

<b>S. No.</b>	<b>District / Constituency</b>	<b>LC No. /Location</b>	<b>Cost in Lakhs</b>
1	Tiruppur/Tiruppur North	LC 132, Tiruppur SRC Mill Gate	4826.00
2	Tiruppur/Tiruppur North	LC 133, Tiruppur	2768.00
3	Tuticorin / Kovilpatti	LC 439, Kovilpatti	1295.00

The details of 16 works for which tenders are to be called for are given:

<b>S. No</b>	<b>District / Constituency</b>	<b>LC No. /Location</b>	<b>Cost in Lakhs</b>
1	Tiruvallur/ Avadi	LC 7, Annanur	1560.00
2	Tiruvallur/ Avadi	LC 9, Hindu college	855.00
3	Tiruvallur/ Poonamallee	LC 16, Putlur	1042.00
4	Villupuram / Villupuram	LC 2, Venkatesapuram	3160.00
5	Erode / Erode West	LC 124, Sastrinagar	918.00
6	Coimbatore / Singanallur	LC 5, Neelikonampalayam	1700.00
7	Coimbatore / Coimbatore South	LC 6, Thanneerpandal	1265.00
8	Coimbatore / Coimbatore South	LC 7, Irugur	3050.00
9	Coimbatore/ Goundampalayam	LC 9, Avarampalayam	2255.00
10	Coimbatore / Coimbatore North	LC 10, Peelamedu	1190.00
11	Tiruppur/ Tiruppur North	LC 131, Tiruppur	1338.00
12	Dindigul / Dindigul	LC 309, Dindigul	2400.00
13	Thanjavur / Thanjavur	LC 304, Thanjavur Oriental tower	4100.00
14	Tiruvarur / Mannargudi	LC 22, Needamangalam	2319.00

<b>S. No</b>	<b>District / Constituency</b>	<b>LC No. /Location</b>	<b>Cost in Lakhs</b>
15	Virudhunagar / Virudhunagar	LC 403, Virudhunagar	2053.00
16	Virudhunagar/ Virudhunagar	LC 406, Virudhunagar	325.00

#### **4.4 Formation of bypasses**

Preparation of Detailed Project Report and land acquisition for the formation of 11 bypasses to a length of 109.05 km at a cost of Rs.116.73 Crore in major towns is in progress.

During 2012-2013, an expenditure of Rs. 52.69 Crore has been incurred.

<b>S. No</b>	<b>District</b>	<b>Location of bypass</b>	<b>Cost in Lakhs</b>
1.	Tirunelveli	Ambasamudram	2728.69
2.	Tirunelveli	Tenkasi	1334.14
3.	Tirunelveli	Sankarankoil	2408.09
4.	Ramanathapuram	Mudukulathur	710.36
5.	Erode	Bhavani	715.89
6.	Namakkal	Namakkal	1070.20
7.	Namakkal	Tiruchengode	588.06
8.	Thiruvannamalai	Thiruvannamalai	856.63

<b>S. No</b>	<b>District</b>	<b>Location of bypass</b>	<b>Cost in Lakhs</b>
9.	Vellore	Arcot	201.31
10.	Vellore	Tirupathur	852.46
11.	Nagapattinam	Myladuthurai	206.68

#### **4.5 Overall Expenditure (2012-2013) and Allocation for 2013-2014:**

During 2012-2013, an expenditure of Rs.217.67 Crore was incurred by this wing for all Plan Schemes. A total of 81 works including 11 roads to a length of 49.00 Km of roads at a cost of Rs.22.84 crore and 70 bridges at a cost of Rs.142.14 Crore were completed. For land acquisition for bypasses Rs.52.69 Crore has been incurred.

For 2013-2014, a total budgetary allocation of Rs.462.11 Crore has been made.







Bridge on Reddiarpatti – Vijayanarayanam road, Tirunelveli District  
inaugurated by the Hon'ble Chief Minister on 09.10.2012





High Level Bridge on Pennar – Bondhai road, Tiruvannamalai District  
inaugurated by the Hon'ble Chief Minister on 30.01.2013





Ongoing High Level Bridge work across Cauvery at Thirukattupalli,  
Thanjavur District





Ongoing High Level Bridge work on Nazerath – Eral road,  
Tuticorin District







High Level Bridge work on Maruthupatti – SS Kottai road, Sivagangai District inaugurated by the Hon'ble Chief Minsiter on 30.01.2013





Ongoing High Level Bridge work on Srivilliputhur – Parthibanur Road,  
Virudhunagar District





Ongoing High Level Bridge work on Pudukottai – Embal Road, Pudukottai District





Bridge on Mudukanthurai - Erankattur Road, Erode District  
inaugurated by Hon'ble Chief Minister on 09.10.2012





## **5. Projects**

The main activity of the wing is to construct Railway Over Bridges and Railway Under Bridges in lieu of existing level crossings in coordination with the Railways on a cost sharing basis under the Railway Works Programme. Major river bridges, Ring roads and Junction improvement works are also carried out by this wing.

It functions under the control of a Chief Engineer with four Circles and eleven Divisions.

### **5.1 Railway Over Bridges and Railway Under Bridges at Railway Level Crossings:**

#### **5.1.1 Railway Works Programme:**

Under the Railway Works Programme, 130 spillover works were taken up in 2012-2013 by all the wings. Of which, 89 works were taken up by the Projects wing at a cost of Rs.2329.13 Crore.

### Spill over works

Sl. No.	District	No. of Railway Over Bridges/ Railway Under Bridges	Cost (Rs. in Crore)
1	Tiruvallur	8	194.81
2	Chennai	1	80.68
3	Kancheepuram	13	405.96
4	Vellore	14	296.43
5	Krishnagiri	2	35.02
6	Villupuram	5	113.09
7	Salem	4	168.86
8	Coimbatore	13	251.90
9	Dindigul	3	96.71
10	Trichy	8	280.63
11	Thanjavur	3	53.84
12	Cuddalore	5	111.25
13	Madurai	1	19.75
14	Tuticorin	1	27.50
15	Tirunelveli	3	82.71
16	Kanyakumari	1	21.40
17	Tiruppur	3	51.44
18	Ramanathapuram	1	37.15
	<b>Total</b>	<b>89</b>	<b>2329.13</b>

In 2012-2013, 14 works have been completed at a cost of Rs.263.48 Crore and

29 works are in progress for a value of Rs.753.56 Crore. The remaining works are in various stages of pre-construction.

### **Completed Railway Over Bridges and Railway Under Bridges**

<b>S. No</b>	<b>District</b>	<b>LC No. &amp; Location</b>	<b>Cost (Rs. in Crore)</b>
1	Kancheepuram	24, Pallavaram	14.00
2	Vellore	50, Thiruvalam	12.26
3	Thanjavur	303, Thanjavur	13.00
4	Vellore	88, Thamalerimuthur	12.00
5	Coimbatore	118, Pollachi	11.45
6	Thiruvallur	33, Gummidipoondi	39.00
7	Thiruvallur	37, Gummidipoondi	17.00
8	Kancheepuram	69, Madhuranthagam	22.50
9	Tiruppur	130, Coolipalayam	17.00
10	Coimbatore	143, Neelambur	12.25
11	Vellore	63, Pasumathur	19.34
12	Cuddalore	170, Virudachalam Town	19.00
13	Kancheepuram	37, Urappakkam	29.68
14	Villupuram	156, Ulundurpet	25.00
		<b>Total</b>	<b>263.48</b>

## Ongoing Railway Over Bridges and Railway Under Bridges

<b>S. No</b>	<b>District</b>	<b>LC No. &amp; Location</b>	<b>Cost (Rs. in Crore)</b>
1	Thiruvallur	38, Elavur	23.37
2	Chennai	Vyasarpadi ROB	80.68
3	Kancheepuram	1, Chengalpattu	34.58
4	Kancheepuram	54, Chengalpattu	43.45
5	Kancheepuram	40, Guduvanchery	31.94
6	Kancheepuram	36, Urappakkam	34.50
7	Kancheepuram	47, Singaperumal Koil	52.89
8	Vellore	69, Ulli	12.00
9	Vellore	82, Vaniyambadi	19.54
10	Vellore	89, Pachal	21.54
11	Krishnagiri	98, Dasampatti	10.63
12	Coimbatore	139, Somanur	15.88
13	Coimbatore	21, Nanjundapuram	11.80
14	Dindigul	5, Dindigul	16.54
15	Trichy	228, Lalgudi	20.50
16	Trichy	248, Trichy	44.52
17	Trichy	279, Manapparai	20.60
18	Coimbatore	144, Irugur	21.10
19	Trichy	325, Crawford, Trichy	28.58
20	Trichy	281, Manapparai	21.53
21	Thanjavur	309, Budalur	16.30

<b>S. No</b>	<b>District</b>	<b>LC No. &amp; Location</b>	<b>Cost (Rs. in Crore)</b>
22	Cuddalore	181, Eraiyur (Pennadam)	23.00
23	Cuddalore	168, Virudachalam (Vayalur)	24.00
24	Cuddalore	166A, Cuddalore Pachayankuppam	24.00
25	Madurai	370, Tiruparangundram	19.75
26	Tirunelveli	502, Tenkasi	24.50
27	Kanyakumari	32B, Eraniel & Nagercoil	21.40
28	Tiruppur	134, Vanchipalayam	17.00
29	Tiruppur	95, Udumalaipet	17.44
		<b>TOTAL</b>	<b>753.56</b>

In the year 2012-2013, the Government have accorded administrative sanction for Rs.100.90 Crore to carry out preliminary works such as Land Acquisition, shifting of Service Utilities and investigation for 12 ROBs/RUBs which are in progress.

## Works Sanctioned during 2012-2013

S. No	District	LC No. & Location	Cost of Preliminary work in Crore
1	Vellore	37, Anvarthiganpet	3.34
2	Cuddalore	138, Panrutti	2.10
3	Trichy	249, Trichy Town station	17.05
4	Ramanathapuram	501, Ramanathapuram	7.32
5	Tirunelveli	6, Palayamkottai	6.88
6	Dindigul	6, Dindigul	17.38
7	Dindigul	8, Dindigul	1.60
8	Madurai	346, Sholavandhan	14.37
9	Dharmapuri	38, Devarasampatti	2.40
10	Dharmapuri	41, Teachers colony	11.90
11	Dharmapuri	43, Kumarasamipet	13.25
12	Dharmapuri	46, Muthugoundenkottai	3.31
		<b>TOTAL</b>	<b>100.90</b>

On completion of land acquisition, administrative sanction will be accorded in

2013-2014 for carrying out main bridge works.

During 2012-2013, an expenditure of Rs.303.11 Crore was incurred under this scheme.

A provision of Rs.694.62 Crore has been made for this scheme for the year 2013-2014.

## **5.2 Construction of Bridges with NABARD Assistance:**

In order to provide necessary road access in rural areas, bridge works under NABARD loan assistance are being carried out. Under this scheme, spill over works of 4 river bridges were taken up, to a value of Rs.96.93 Crore in 2012-2013.

In 2012-2013, one work has been completed at a cost of Rs.3.08 Crore. 3 bridge works are in progress and will be completed during 2013-2014.



## Completed River Bridge under the NABARD Scheme

Sl. No	Nomenclature	Cost (Rs. in Crore)
	Thiruvarur District	
1	Bridge across Vettar on the Kumbakonam - Kodavasal-Koradacheri- Mavoor road.	3.08
	<b>TOTAL</b>	<b>3.08</b>

## Ongoing River Bridges under the NABARD Scheme

Sl. No	Nomenclature	Cost (Rs. in Crore)
	Karur, Namakkal Districts	
1	Construction of a High Level Bridge across Cauvery river Connecting Mohanur (Namakkal District) and Vangal (Karur District)	43.50
	Cuddalore, Nagapattinam Districts	
2	Construction of High level bridge across the Kollidam river between Muttam village of Cuddalore District and Manalmedu village of Nagapattinam District.	48.85
	Thiruvarur District	
3	Reconstruction of the bridge across Vellaiyar on the Mannargudi - Tiruvarur road.	1.50
	<b>TOTAL</b>	<b>93.85</b>

An expenditure of Rs.11.22 Crore was incurred under this scheme in the year 2012-2013.

A provision of Rs.1.91 Crore has been made for this scheme for the year 2013-2014.

### **5.3 Construction of Bridges with HUDCO Assistance:**

In 2012-2013, spillover works of 3 river bridges were taken up at a cost of Rs.11.04 Crore and the following 2 works have been completed at a cost of Rs.6.74 Crore.

#### **Completed River Bridges under the HUDCO Scheme**

<b>S. No</b>	<b>Name of Work</b>	<b>Cost (Rs. in Crore)</b>
	Thiruvarur District	
1	Bridge across Mudikondan river on SH 23 (Mayiladuthurai - Thiruthuraipoondi road)	2.33

<b>S. No</b>	<b>Name of Work</b>	<b>Cost (Rs. in Crore)</b>
	Thanjavur	
2	Bridge across Kudamuruti river in Manathidal – Valapakudi road	4.41
	<b>TOTAL</b>	<b>6.74</b>

The following one work will be completed in the year 2013-2014.

<b>S. No</b>	<b>Name of Work</b>	<b>Cost (Rs. in Crore)</b>
	Thiruvarur District	
1	Bridge across Arasalar on SH 23 (Mayiladuthurai – Thiruthuraipoondi road)	4.30

During 2012-2013, an expenditure of Rs.7.14 Crore was incurred under this scheme.

#### **5.4 Road Works under TNUDP**

The work of forming the southern sector of the Chennai Inner Ring Road was completed already and an amount of

Rs. 15.89 crore was spent towards additional compensation for Land Acquisition during 2012-2013.

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

### **5.5.1 Erode Outer Ring Road:**

With a view to minimise the heavy traffic congestion in Erode Town and to have a free flow of traffic, Government have accorded sanction for Rs. 22 Crore towards land acquisition for the formation of a ring road from Kokkarayanpettai to Thindal to a length of 14.80 km. Land Acquisition has been completed in the stretch from Km 0/0 to 7/6 and in the remaining stretch from Km 7/6 to 14/8, it is in progress.

In Phase I, the work of formation of the outer ring road from km 0/0 to 2/2

including construction of a high level bridge across Cauvery River to a value of Rs.14 Crore has been taken up as spillover work in 2012-2013 and is in progress.

In phase II, the stretch from km 2/2 to 7/6 to a value of Rs.12 Crore has been taken up as spillover work in 2012-2013 and is in progress.

After completion of Land Acquisition in the stretch Km 7/6 -14/8, work will be taken up during 2013-2014.

### **5.5.2 Erode Government Hospital Junction Improvement:**

The work on improvements to the junction of the Erode -Perundurai - Kangeyam road near the Government Hospital including Land Acquisition to a value of Rs.11 Crore has been taken up as a spillover work in 2012-2013 and the Land

Acquisition is in progress. The improvement to junction will be taken up in 2013-2014.

## **5.6 Sugarcane Road Development Scheme:**

The cess fund collected from sugar mills is utilised for the formation of roads from sugarcane growing areas to sugar mills. Under this scheme, during 2012-2013 2 spillover road works for a length of 2.83 Km to a value of Rs.0.88 Crore were taken up and completed.

An expenditure of Rs. 0.55 Crore was incurred under this scheme in the year 2012-2013

A provision of Rs.0.21 Crore has been made for this scheme in the year 2013-2014.

## **5.7 Overall Expenditure (2012-2013) and Allocation for 2013-2014:**

During 2012-2013, an expenditure of Rs.378.88 Crore was incurred in all schemes.

For 2013-2014, a total budget allocation of Rs.766.68 Crore has been made for Projects Wing.



Ongoing Railway Over Bridge work at Vyasarpadi, Chennai.







Railway Over Bridge at Pallavaram, Chennai  
inaugurated by the Hon'ble Chief Minister on 09.10.2012.





Railway Over Bridge at Gummidipoondi  
inaugurated by the Hon'ble Chief Minister on 09.10.2012.





Railway Over Bridge at Thiruvallur, Vellore District  
inaugurated by the Hon'ble Chief Minister on 09.10.2012.





Railway Over Bridge at Pakkam, Maduranthagam  
inaugurated by the Hon'ble Chief Minister on 30.01.2013.







Completed Railway Over Bridge work at Virudhachalam.





Completed Railway Over Bridge at Coolipalayam, Tiruppur





Ongoing Railway Over Bridge work near Kollidam River, at Srirangam, Trichy





Ongoing Railway Over Bridge work at Manaparai, Trichy





## **6. Metro**

Improvements of road and bridge infrastructure facilities, construction of Foot Over Bridges, Subways, Railway Over Bridges and Railway Under Bridges are being taken up by the Metro wing in the Chennai Metropolitan Area with state budgetary allocation and World Bank loan assistance.

This wing is headed by a Chief Engineer with one Circle and four Divisions.

### **6.1 Chennai Metropolitan Development Plan (CMDP) :**

To improve the road and bridge infrastructure facilities in the Chennai Metropolitan Area, the Chennai Metropolitan Development Plan is being implemented since 2003-2004 with State budgetary allocation. The Comprehensive

Traffic & Transportation Study for the Chennai Metropolitan Area and the Second Master Plan of the CMDA have recommended the projects that are required to be implemented in a span of 15 years (2010- 2025). In the above report, about 340 works have been identified at an approximate cost of Rs.14,070 Crore.

So far, the Government have given its approval for 239 improvement works at a cost of Rs.975.51 Crore which includes 473 km of road works, 7 Bridges, 5 Grade Separators, one Railway Over Bridge.

Further, a Grade Separator on Periyar EVR Salai at the junction of Nelson Manickam road and Anna Nagar III Avenue junction has been approved by the Government at a cost of Rs.117 Crore and the work is in progress.

In 2012-2013, the Government have accorded its administrative sanction for two road works at a cost of Rs. 45 Crore, eight bridge works at a cost of Rs.30 Crore, four Grade Separator at a cost of Rs. 271.68 Crore, one Sky walk at a cost of Rs.20 Crore and five Pedestrian subways at a cost of Rs. 19 Crore and the project reports are under preparation.

Major works under implementation are detailed below:-

#### **6.1.1 Grade Separators :**

Work on five Grade Separators at a cost of Rs.330.93 Crore is in progress. The details of the works are given below:

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost (Rs. in Crore)</b>
Thiruvallur District		
1	Grade Separator at the intersection of Mount Poonamallee road with Kodambakkam - Sriperumpudur road at Porur	34.72
2	Grade Separator at the intersection of Madhavaram High road with G.N.T Road at Moolakkadai	49.55
Chennai District		
3	Grade Separator at the intersection of Anna Nagar IInd Avenue and Mogappair road with Inner Ring road at Tirumangalam	60.23
4	Grade Separator at the intersection of N.S.K Salai (Arcot Road) with Inner Ring road at Vadapalani	69.43
5	Grade Separator on EVR Salai at the intersection of Nelson Manickam road and Anna Nagar 3rd Avenue road.	117.00
	<b>Total</b>	<b>330.93</b>

### **6.1.2 River Bridges :**

Work on two River Bridges at a cost of Rs.68.70 Crore are in progress and these are expected to be completed during

2013-2014. The details of works are given below:

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost (Rs. in Crore)</b>
Thiruvallur District		
1	Highlevel Bridge across Coovam river at the road connecting GWT road at km11/2 and Mogappair near Nerkundram	16.04
2	Highlevel Bridge across Ennore Creek on the road connecting Ennore Expressway with North Chennai Thermal Power station.	52.66
	<b>Total</b>	<b>68.70</b>

### **6.1.3 Railway Over Bridges/ Under Bridges at Railway Level Crossing :**

Government have accorded Administrative Sanction for 9 works at a cost of Rs.289.72 Crore of which two (Level Crossing 5 and 14) are in progress and the remaining seven are at different stages of

pre-construction. During 2013-2014, the two Railway Over Bridge works which are in progress are expected to be completed. The details of these works are given below:

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost (Rs. in Crore)</b>
Thiruvallur District		
1	LC No.3 -Construction of Railway Over Bridge near Tiruvotriyur - Mattusandhai	47.00
2	LC No.4 -Construction of Railway Under Bridge near Tiruvotriyur Railway station.	28.00
3	LC No.6 - Construction of Railway Under Bridge near Tiruvotriyur - Wimco Nagar Railway station.	25.50
4	LC No.5 - Construction of Railway Over Bridge near Pattaravakkam	35.00
5	LC No.14 - Construction of Railway Over Bridge near Veppampattu Railway station	29.50
6.	LC No.4 - Construction of Railway Under Bridge near Korattur Railway station	19.97

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost (Rs. in Crore)</b>
Kancheepuram District		
7.	LC No.32&33 – Construction of Railway Over Bridge near Perungalathur Railway station	76.00
8	LC No.22 –Construction of Railway Under Bridge near Thirusulam	14.00
9.	LC No.27 –Construction of Limited Use Subway near Chrompet Radha Nagar	14.75
	Total	289.72

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

The TNUDP–III Scheme was formulated in 2005 and is being implemented with World Bank assistance.

### **6.2.1 Road Works:**

Under the traffic component, five road projects for a length of 36 km at a cost of Rs.145 Crore have been taken up of



which three have been completed and the remaining two road works will be completed in the year 2013-2014.

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost (Rs. in Crore)</b>
Thiruvallur District		
1	Widening from intermediate lane to two lane and strengthening of the Minjur - Kattur Thirupalaivanam Road, (MKT Road) km 0/0-17/4	49.73
Chennai District		
2	Widening and strengthening of the Taramani link road km 0/0-3/650 from two lane to six lane	38.94

### **6.2.2 Foot Over Bridges :**

The Government have accorded sanction at a cost of Rs.28 Crore for the construction of Foot Over Bridges in the following seven locations where the volume of pedestrian traffic is high.

1. G.S.T Road, near Chrompet Government Hospital.
2. G.S.T Road, near MEPZ, Tambaram.
3. Inner Ring Road, near SBOA School road junction, Thirumangalam.
4. Taramani Link Road, near TCS.
5. Taramani Link road, near Perungudi junction.
6. EVR Salai near MOP Vaishnava College.
7. Velachery Bypass, near Metro water filling station.

Among these, the first 5 works are in progress and will be completed during 2013-2014.

### **6.3 Works Under DPR Stage :**

**a.** During 2012-2013, to improve infrastructure facilities, the Government have accorded administrative sanction for the following 3 Grade Separators at a cost of Rs.231.68 Crore. Detailed designs for

the following works are being prepared and will be taken up for implementation in 2013-2014.

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost Rs. in Crore</b>
1.	Construction of a Grade Separator at the junction of Kundrathur road and Santhai road at Pallavaram in GST road	80.74
2.	Construction of a Grade Separator at the junction of Taramani road, Tambaram - Velachery road and Velachery bypass in Velachery Vijayanagaram junction	98.22
3.	Construction of a Grade Separator at the junction of Perambur - Redhills road near Kolathur Rettai Eri in Inner Ring Road	52.72
<b>Total</b>		<b>231.68</b>

**b.** The Government have accorded administrative approval for the preparation of DPRs for 12 works, the details of which are as indicated below:

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Rough cost Rs. in Crore</b>
1	New link road connecting Rajiv Gandhi Salai (OMR) with East Coast Road at Palavakkam (2.0 km)	50.00
2	Grade Separator at the junction connecting Medavakkam road and Pallavaram Thuraipakkam road near Keelkattalai	60.00
3.	Grade Separators at Medavakkam – Sholinganallur road junction, Medavakkam – Mambakkam road junction and Mount – Medavakkam junction in Maramalai Adigal Bridge – Irumbuliyur(MBI) road.	90.00
4.	Grade Separator at the junction of ECR – Thiruvanmiyur road	160.00
5.	High level bridge across Coovam river in NH 4 at Nolambur road junction	12.00
6.	High level bridge across Coovam river in M.P road-Paruthipattu road at km 0/6	8.00
7.	Widening of ROB at km 20/8 of Mount-Poonamallee-Avadi road.	15.00

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Rough cost Rs. in Crore</b>
8.	Widening of ROB to dual four lane at km 12/2 -13/2 of Inner Ring Road	20.00
9.	New link road connecting Rajiv Gandhi Salai (OMR) with East Coast Road at Neelankarai (2.0 km)	50.00
10.	Grade Separator at the junctions connecting Mount – Poonamallee-Avadi road, Chennai – Chittor-Bengaluru road, Kundrathur road near Poonamallee Kattupakkam	60.00
11.	RUB at the junction of Mount – Medavakkam road and Southern Sector of Inner Ring Road	25.00
12.	Widening of high level bridge across the river Adyar in Mount – Poonamallee Road near Ramapuram	8.00
	Total	558.00

DPR for these works are under preparation and Alignment proposals have been approved by the Steering Committee for the first 6 works.

**c.** Further, Government have accorded Administrative Sanction for 15 works which have been prioritized for implementation under the CMDP scheme. Among these 15 works, the alignment proposals have been approved by the Steering Committee for the first 7 works at a cost of Rs.79 Crore. Out of remaining 8 works, tender has been called for 1 work and DPR preparation is in progress for other 7 works. All the 15 works will be taken up for implementation in 2013-2014.

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost Rs. in Crore</b>
<b>I. Pedestrian Subway</b>		
1.	Near A.G Church in Anna Salai.	3.50
2.	Near M.K.N road junction at Guindy in GST road.	3.50
3.	At km 1/6 of Jawaharlal Nehru Salai (IRR) near Malladi company at Ekkattuthangal.	3.50

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost Rs. in Crore</b>
4.	At km 2/7 Inner Ring Road (IRR) near Kasi theatre.	3.50
5.	At km 7/7 of Inner Ring Road (IRR) near CMBT.	5.00
<b>II. Sky walk</b>		
6	A sky walk connecting Central station, Park station and GH in EVR Salai.	20.00
	<b>Total (6 works)</b>	<b>39.00</b>
<b>III. Grade Separators</b>		
7.	Construction of a Grade Separator connecting the junctions of Mofussil bus entrance of CMBT and Kalamman Koil road junction in Jawaharlal Nehru Salai (IRR)	40.00
	<b>Total (1 work)</b>	<b>40.00</b>
<b>IV. Bridge works</b>		
8.	Construction of additional 3 lane bridge across the river Coovam near Aminjakarai in EVR Salai	8.00
9.	Widening of Bridge on the Mount – Poonamallee Avadi road (SH-55)	1.00
10.	Construction of an additional two lane bridge on the Mount – Poonamallee Avadi road (SH-55)	5.00

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Cost Rs. in Crore</b>
11.	Construction of an additional two lane bridge on the Singaperumalkoil – Sriperumpudur –Thiruvallur – Redhills road (SH-57)	2.00
12.	Construction of a high level bridge on the Karanodai- Minjur road	9.00
13.	Construction of a bridge on the Tambaram - Mudichur road (SH110)	2.00
14.	Construction of a bridge on the Chennai – Kodambakkam - Sriperumpudur Road (SH113)	2.00
15.	Construction of a bridge on the Chennai-Kodambakkam- Sriperumpudur Road (SH113)	1.00
	<b>Total (8 works)</b>	<b>30.00</b>
	<b>Grand Total (15 works)</b>	<b>109.00</b>



#### **6.4 Overall Expenditure (2012-2013) and Allocation for 2013-2014:**

During 2012-2013, one bridge work under CMDP has been completed and an expenditure of Rs.116.16 Crore have been incurred for implementation of various works under the above schemes.

For the year 2013-2014, a total budgetary allocation of Rs.250 Crore has been provided under CMDP scheme.



The Thiru-vi-ka-bridge at Adyar, Chennai  
inaugurated by the Hon'ble Chief Minister on 30.01.2013.





Ongoing High Level Bridge work at Ennore Creek, Chennai.





Ongoing River Bridge work across Couam River at Mogappair, Chennai.





Ongoing Grade Separator work at Moolakadai, Chennai.







Ongoing Grade Separator work at Thirumangalam, Chennai.





The restored Anna Arch opened for traffic on 04.01.2013





Ongoing Grade Separator work at the Nelson Manickam Road junction,  
Aminjikarai, Chennai.





Ongoing Railway Over Bridge work at Veppampattu, Chennai.







Ongoing Railway Over Bridge work at Pattaravakkam, Chennai.



## **7. National Highways**

The National Highways are the arterial roads which criss-cross the States as well as the Nation joining the different State capitals, Major Ports, Industrial Areas and other tourist centres. Hence, these roads always encounter very high traffic density.

The National Highways roads in Tamil Nadu traverse a total length of 4974 Km out of which 1500 Km are being maintained by the State National Highways wing and the remaining 3474 km by the National Highways Authority of India (NHAI).

The lane wise details of National Highways roads in the State are given below:

Length in Km

S. No	Category of Roads	Single lane roads	Inter-mediate lane roads	Double Lane roads	Multi lane roads	Total
1	National Highways wing	13	34	1414	39	1500
2	National Highways Authority of India	-	-	1371	2103	3474
	Total	13	34	2785	2142	4974

### **7.1 Core Activities:**

The National Highways wing has eight Divisions and four Circles in Tamil Nadu. It functions under the supervision of a Chief Engineer. The National Highways roads are maintained, improved and new construction of roads and bridges are carried out using funds from Ministry of Road Transport and Highways of the Government of India.

The following important schemes are implemented by this wing.

- Plan and Non Plan works.
- The Revamped Central Road Fund Scheme works (RCRF)
- The Inter State Connectivity Scheme works (ISC)
- The Economic Importance Scheme works (EI)
- The Western Ghats Development Programme works (WGDP)
- The Hill Area Development Programme works (HADP)
- The Bharat Nirman Scheme works with the funds from Ministry of Rural Development, Government of India.

## **7.2 Projects and Schemes implemented by this wing:**

### **7.2.1 National Highways Works:**

Widening, improvements, strengthening and maintenance works are being carried out in the State National Highways roads, using funds from Ministry of Road Transport and Highways, Government of India.

### **7.2.2 Plan Works:**

In 2012-2013, 29 road improvement works to a total length of 346.12 Km and 7 bridge works were taken up as spillover at a cost of Rs.348.83 Crore. In addition to this, the Ministry of Road Transport and Highways, Government of India has sanctioned 18 road works, for 86.45 Km and one bridge work at a cost of Rs.104.30 Crore under its Annual Plan 2012-2013.

Under this scheme 16 Nos. of road works to a length of 250.12 Km and 2 bridge works at a cost of Rs.213.06 Crore have been completed in 2012-2013.

For the financial year 2013-2014, tentative allotment of Rs.180 Crore is expected from the Ministry of Road Transport and Highways under this scheme.

### **7.2.3 Non Plan Works:**

Under Special Repairs and Periodical Renewals, seven road works to a length of 73.15 Km at a cost of Rs.30.34 Crore were taken up as spill over in 2012-2013. Further the Ministry has sanctioned nine road works to a length of 61.40 km at a cost of Rs.31.77 Crore.

For the financial year 2013-2014, tentative allotment of Rs.40 Crore is



expected from the Ministry of Road Transport and Highways under this scheme.

### **7.3 Centrally Sponsored Schemes:**

Government of India has created the Central Road Fund with the accruals from 50% cess levied on High Speed Diesel and 100% cess on Petrol for development of National Highways and other State roads. Out of this, 30% of funds will be provided for development and maintenance of State roads under the Revamped Central Road Fund Scheme, the Economic Importance Scheme and the Inter State Connectivity Scheme.

#### **7.3.1 Revamped Central Road Fund Scheme:**

In 2012-2013, works costing Rs.86.89 Crore were taken up as spill over under this scheme. This consists of 11 road

works to a length of 126.73 Km and 2 bridge works. Further, during 2012-2013 the Ministry of Road Transport and Highways, Government of India, has sanctioned 19 road works to a length of 208.77 Km amounting to Rs.166.22 Crore as new works.

Out of this, 11 road works to a length of 118.83 Km and one bridge work at a cost of Rs.120 Crore have been completed during 2012-2013.

A budget provision of Rs.163 Crore has been made under this scheme for the financial year 2013-2014.

### **7.3.2 Bharat Nirman Programme – Phase III:**

In 2012-2013, the Ministry of Rural Development, Government of India has accorded clearance for proposals under

Bharat Nirman Phase III, costing Rs.278.94 Crore for the upgradation of 332 road works to a length of 1064.55 Km in 25 Districts. Accordingly, the Government have issued orders vide, G.O.(D).No.116, Rural Development and Panchayat Raj (CGS2) Department, dated 19.03.2013 for its implementation. These works will be taken up and completed during 2013-2014.

#### **7.4 Hill Area Development Programme:**

This scheme is being implemented by the State Government, to improve Hill roads in Nilgiris District with the funds provided by Government of India.

Under this scheme, 5 road works to a length of 7.20 Km and 5 Cross Drainage works amounting to Rs.2.70 Crore were

taken up as spill over. Further, the Government have sanctioned 4 road works to a length of 4.00 Km and 3 road protective works amounting to Rs.2.26 Crore during 2012-2013.

Out of this, 5 road works to a length of 7.20 Km and 5 Cross Drainage (CD) works have been completed at a cost of Rs.2.55 Crore during 2012-2013.

A budget provision of Rs.2.30 Crore has been made under this scheme for the financial year 2013-2014.

### **7.5 Overall Expenditure (2012-2013) and Allocation for 2013-2014:**

During 2012-2013, a total allocation of Rs.285.33 Crore has been made by the Ministry of Road Transport and Highways, New Delhi for NH works and fully utilized. Apart from this an amount of

Rs.130.78 Crore has been spent under the State Plan Schemes during 2012-2013.

Further a tentative allotment of Rs. 240 Crore is expected from the Ministry of Road Transport and Highways for NH works during 2013-2014. In addition to this, a budget provision of Rs.188.79 Crore has been earmarked during 2013-2014 under State Plan Schemes.

## **7.6 Projects Executed by National Highways Authority of India (NHAI)**

The National Highways Authority of India was constituted by an Act of Parliament; the National Highways Authority of India Act 1988 for the development, maintenance and management of National Highways entrusted to it and was operationalized in February 1995. The NHAI is implementing

the National Highways Development Programme (NHDP) approved by Government of India in seven phases. Apart from this, roads, flyovers, underpasses are being constructed and improved under Port Connectivity Project and Other Special Projects.

National Highways 4, 5, 7, 7A, 45, 45A, 45B, 45C, 46, 47, 47B, 49, 66, 67, 68, 205, 209, 210, 220, 226 & 227 in Tamil Nadu are being improved by Government of India under NHDP through NHAI in association with State Government.

The State Government extends its co-operation and assistance to NHAI in the matters of pre-construction activities such as land acquisition, shifting of utilities etc.,

## **7.7 Projects implemented:**

### **7.7.1 Works completed by NHAI:**

2089 km length of roads at a cost of Rs.13,079 Crore have been upgraded to four lane / six lane.

### **7.7.2 Works under Implementation by NHAI:**

1136 km length of roads at a cost of Rs.9278 Crore is under execution and 1749 km length of roads is to be awarded.

## **7.8 Port Connectivity Scheme:**

The Cabinet Committee on Economic Affairs (CCEA) approved the port connectivity scheme in the year 2000 with the objective of connecting the 12 important ports in India through NHAI by establishing a Special Purpose Vehicle (SPV). Two Special Purpose Vehicles (SPV) have been established in Tamil Nadu to

improve the roads connecting 3 major ports Chennai, Ennore and Thoothukudi.

### **7.8.1 Chennai - Ennore - Manali Road Improvement Project (EMRIP)**

In order to implement this project, NHA I established a SPV namely Chennai Ennore Port Road Company Ltd with Government of Tamil Nadu, Chennai Port Trust and Ennore Port Ltd as partners.

The State Highways stretches taken up for improvements under this Port Connectivity Scheme are given below:

<b>Sl. No</b>	<b>Nomenclature</b>	<b>Length in km</b>
1	Widening to four lane with service road and Improvements to Tiruvotriyur – Ponneri - Panchetti Road	9.00
2	Strengthening and improvements to existing four lane Manali oil refinery road.	5.40



<b>Sl. No</b>	<b>Nomenclature</b>	<b>Length in km</b>
3	Strengthening and improvements to existing 4-lane Northern segment of Inner Ring Road by providing paved shoulder	8.10
4	Widening to four lane with service road and Improvements to Ennore expressway	7.50
	<b>Total</b>	<b>30.00</b>

The estimated cost of the project is Rs.600 Crore. The details of contributions by the share holders of the company are given below:

### **Cost sharing details of Chennai - Ennore - Manali Road Improvement Project**

Sl. No	Contributed by	Contribution Amount	Loan	Total	Contribution made so far
		Rupees in Crore			
1	National Highways Authority of India	139.80	117.50	257.30	139.80
2	Chennai Port Trust	139.80	110.68	250.48	137.00

Sl. No	Contributed by	Contribution Amount	Loan	Total	Contribution made so far
		Rupees in Crore			
3	Govt. of TamilNadu	58.20	--	58.20	48.04
4	Ennore port	34.02	--	34.02	30.00
	<b>Total</b>	<b>371.82</b>	<b>228.18</b>	<b>600.00</b>	<b>354.84</b>

In order to protect Ennore Expressway from sea erosion, 10 groynes and seawall for a length of 500m along the sea coast, at a cost of Rs.24.58 Crore were constructed.

Agreement for the 4-laning and Improvement of all the above four roads along with the construction of 3 additional Groynes was executed and the work commenced in June 2011. The work is likely to be completed by December 2013.

### **7.8.2 Thoothukudi Port Connectivity Scheme:**

Under this scheme, NHAI established a SPV namely, Thoothukudi Port Road Company Ltd with Thoothukudi Port Trust to improve 47.20 km length of road in NH-7A from Tirunelveli to Thoothukudi at a cost of Rs.290 Crore. The work has been completed in January 2013.

### **7.9 Bypasses taken up and executed by NHAI:**

99 bypasses have been taken up by NHAI for execution. Out of this, 65 bypasses have been completed. 34 bypasses are in progress and details are given below:

<b>Sl. No.</b>	<b>Nomenclature</b>	<b>NH No.</b>	<b>Length in km.</b>
1	Trichy	67	17.305
2	Coimbatore		26.470
3	Periyanaicken Palayam		9.840
4	Karamadai		4.330
5	Mettupalayam		7.450
6	Gudalur	220	4.190
7	Cumbum		7.620
8	Uthamapalayam		4.430
9	Chinnamanur		3.480
10	Trichy	210	25.910
11	Kiranur		4.100
12	Pudukottai		10.400
13	Tirumayam		2.500
14	Karaikudi		19.670
15	Perumanallur	47	4.740
16	K.G.Chavadi		3.220
17	Vathalakundu	45 Extn.	6.100
18	Devadanapatti		3.370
19	Periyakulam		11.040
20	Theni		12.550
21	Veerapandi		2.340

<b>Sl. No.</b>	<b>Nomenclature</b>	<b>NH No.</b>	<b>Length in km.</b>
22	Tindivanam	66	4.670
23	Gingee		4.780
24	Kilpennathur		4.260
25	Tiruvannamalai		9.700
26	Chengam		5.750
27	Singarapettai		3.430
28	Uttangarai		4.430
29	Mathur		3.210
30	Kanakammachatram	205	1.800
31	Tiruvallur		6.200
32	Thanneer Kulam		0.800
33	Thozur & Sevapet (combined)		3.300
34	Vepampattu		3.600

### **List of Bypasses completed by NHAI:**

<b>Sl. No.</b>	<b>Nomenclature</b>	<b>NH No.</b>	<b>Length in km.</b>
1	Bargur	46	5.200
2	Natrampalli		2.700
3	Vaniyambadi		2.300
4	Walajapet	4	0.600
5	Baluchettichathram		1.600
6	Sunguvarchathram		2.400

<b>Sl. No.</b>	<b>Nomenclature</b>	<b>NH No.</b>	<b>Length in km.</b>	
7	Kaveripattinam	7	5.150	
8	Periyampatti		1.750	
9	Matlampatti		1.180	
10	Dharmapuri- Adhiyamankottai – Nallampally (combined)		15.550	
11	Omalur		2.400	
12	Salem		8.400	
13	Mallur		2.150	
14	Puthuchathiram		1.500	
15	Chellappampatti		1.830	
16	Namakkal		8.400	
17	Velur		3.780	
18	Karur		9.600	
19	Vedasendur		7	5.700
20	Kodai Road			3.550
21	Vadipatti	6.100		
22	Madurai	14.350		
23	Thirumangalam	6.250		
24	Chinnodaipatti	1.800		
25	Kayathar	3.680		
26	Tirunelveli	19.660		
27	Valliyur	7	6.560	
28	Nanguneri		26.600	

<b>Sl. No.</b>	<b>Nomenclature</b>	<b>NH No.</b>	<b>Length in km.</b>
29	Kavalkinaru		1.700
30	Palavoor		1.340
31	Karunkulam		1.700
32	Anjugramam – Kanniyakumari (Combined)		11.690
33	Kondalampatti	47	3.480
34	Sankagiri		10.150
35	Pallakkapalayam		1.410
36	Chithode		4.650
37	Nasiyanur		2.280
38	Perunthurai		7.600
39	Vijayamangalam		2.270
40	Pallagoundapalayam		1.480
41	Chengapalli		1.200
42	Avinashi		7.850
43	Viralimalai		45B
44	Thuvarankurichi	3.860	
45	Kottampatti	3.770	
46	Melur	7.280	
47	Othakadai	5.800	
48	Kariyappatti	4.700	
49	Kalkurichi	45B	3.200
50	Panthalkudi		6.200

<b>Sl. No.</b>	<b>Nomenclature</b>	<b>NH No.</b>	<b>Length in km.</b>
51	Thiruchitrambalam	66	6.230
52	Kiliyanur		5.580
53	Vallam	67	3.900
54	Kulithalai		10.000
55	Karur		14.800
56	Ulundurpet	68	2.570
57	Kallakurichi		5.100
58	Elavanasurkottai		4.000
59	Thiyagathurugam		3.900
60	Chinnasalem		4.600
61	Narasingapuram- Athur		7.200
62	Vazhapadi		4.620
63	Udaiyapatti		6.400
64	Lakshmipuram	205	1.200
65	Arcotkuppam		1.700

### **7.10 Land Acquisition:**

Tamil Nadu Government plays a vital role in acquiring land for the completion of projects taken up by National Highways Authority of India. Now out of 4487 Ha. of land required for the ongoing and new



projects which are proposed to be taken up, 2060 Ha. land has been acquired and acquisition is in progress for the remaining extent of 2427 Ha. of land.



Bridge on Madurai – Cochin Road near Thimmarasanaickanur  
inaugurated by the Hon'ble Chief Minister on 09.10.2012





Ongoing Bypass work at Kancheepuram



## **8. Quality Assurance and Research**

The Quality Assurance and Research wing, functioning under the control of the Chief Engineer, was started way back in 1957 and it was originally known as Highways Research Station (HRS). Research on Road and Testing of Materials, Quality Control for Road & Bridge works are the primary duties of this wing, by which it provides technical advice and guidance to the Highways Department. A Joint Chief Engineer, four Deputy Chief Engineers (Research) and Eight Divisional Engineers (Quality control) are in charge of the activities of HRS. The objectives and functions are as follows;

- Assessing the quality and suitability of the materials and composite

materials used for road and bridge construction

- Assurance of quality standards for all the materials used in the construction of roads and bridges at all stages of works for all the works executed by the Department
- Continued Research in all aspects of Highway Engineering with a view of optimal utilization of resources for achieving the best quality road network

### **8.1 Quality Control Mechanism:**

A three-tier quality control system has been put in place to check the quality of works at all stages, by conducting relevant tests. Quality control laboratories at Circle and Division levels have been formed to achieve the above purpose. The

quality checks conducted at the preliminary stage of a work, avoid considerable wastage of time, energy and financial resources, enabling to take corrective measure at this stage itself.

## **8.2 Laboratories:**

Four laboratories at Chennai viz., Soils, Concrete, Bitumen and Traffic are functioning under the control of the Chief Engineer, Quality Assurance and Research. Apart from this, four regional labs one each at Thanjavur, Coimbatore, Madurai and Tirunelveli also function under the control of Chief Engineer.

With a specific focus to achieve better quality standards in all the works of this department, four additional Regional Labs are proposed to be instituted in the



ensuing year, at Villupuram, Tiruchy, Salem and Tiruppur.

The broad functions of the above labs are:

- Suitability and Quality assessment of basic material used in the construction of roads and bridges.
- Ascertaining the quality standard for the materials and composite materials used in the construction of roads by conducting lab tests and field tests.
- Closer scrutiny of performance behavior of materials used in the road construction.
- Problem-assistance to field Engineers for arriving at a solution in distressed areas.

- Identifying accident-prone areas and suggesting suitable remedial measures to minimize the accidents.

This apart, designing of flexible & rigid pavements, subsurface soil exploratory works, pile load tests for bridges, non-destructive tests on concrete members, tests on steel, mix design for all layers and elements of Roads and Bridges, evaluation and testing of structural and surface characteristics of roads by Axle load tests and surface roughness tests.

Non-standard junctions are highly prone to accidents. The junction pattern and existing characteristics are closely studied and based on the data collected and detailed analysis, road junctions are

designed to reduce Road Traffic Accidents, drastically.

Co-ordination with the Government agencies such as Traffic Police Department on transportation and traffic related issues, offering expert advice on technical specifications for road safety related components etc., are also the functions of Quality Assurance and Research wing.

As a result of effectively carrying-out all the above activities, during 2012-2013, the Quality Assurance and Research wing has earned a Revenue to the tune of Rs.4.17 Crore to the State's exchequer by way of Lab and field tests.

### **8.3 Research Activities:**

During the year 2012-2013 four research schemes were undertaken by this Institute and the status are as follows:

- Study on the Effect of use of Retarder in Concrete Mix and its effects on Concrete Strength. Laboratory tests have been completed and the performance is under observation.
- Feasibility Study on Transition of Marshall Mix Design to Super Pave Design. Sophisticated equipments needed for the study have been procured and the sample testing have commenced. The Behaviour of Design would be observed.
- Study on the performance of flexible pavement. Candidate stretches have been selected and preliminary field and lab tests have been commenced.
- Journey and Speed Studies on selected stretches of Urban, Semi-Urban and Rural roads within the

State. Two case studies have been selected, one at Chennai and the other at Madurai city. First round of observation completed. The second round of observations, are in progress.

For the first time in recent decades, eight technical papers were presented by HRS at the 73<sup>rd</sup> Annual Session of Indian Roads Congress, conducted at Coimbatore during January 2013. These Technical papers were part of ongoing research Schemes of this Institute. The expertise and knowledge gained in the Research, was shared through Technical Forums.

For the year 2013-2014, the following Research studies are proposed to be conducted:-

- Study on the Luminosity of street lighting on select stretches of corridors at urban, semi -urban stretches of the city.
- To study the possibility of using copper slag as fine aggregate in Cement concrete pavement.

#### **8.4 Training:**

Training activities have been given a fresh impetus by the Quality Assurance & Research, HRS. In the year 2012-2013, about 387 Engineers of the department in all cadres have been trained on various aspects of Highway Engineering with a focus on all round development of the Engineers.

During 2012-2013, about 296 students of all premier Engineering institutions all over the state have completed their project

thesis work and in-plant training at HRS. Moreover around 600 students have undergone one day training at HRS.

This Institute is equipped with latest, sophisticated state-of-art equipments, knowledge resources and skilled manpower. Hence, HRS has emerged as the favorable destination of the students including IITs for completing the project thesis and undergoing training.

Hence, it has been contemplated to establish a dedicated, exclusive Training Centre with all the latest state of-art facilities in the compound of HRS which would be imparting quality training programme to the Engineers of all cadres throughout the country, throughout the year.

The Training Centre would also undertake research programmes and coordinate with other premier research institutes and Technical Bodies such as IRC, CRRI / MARI, GERI, NITHE, IITs, Reputed Engineering Institutions etc., to promote technical excellence and research.

### **8.5 International Organization for Standardization (ISO 9001-2008 Certificate)**

The office of the Chief Engineer (H) Quality Assurance and Research has been accredited with ISO 9001-2008 certification. This also includes Regional Labs at Thanjavur, Madurai, Tirunelveli, Coimbatore and the Office of the Superintending Engineer, Construction and Maintenance wing at Chennai, Salem, Madurai and Tirunelveli.



This is a feather in the cap of the Highways Department to achieve more and more better results in future.

## **9. Planning, Designs and Investigation**

The Planning, Designs and Investigation Wing comprises one Chief Engineer, one Joint Chief Engineer, four Designs Divisions at Headquarters and eight Investigation Divisions with their Headquarters at various places in Tamil Nadu.

This wing undertakes field investigation works at bridge sites, preparation of detailed design, preparation of detailed drawings and quantity estimates and giving technical guidance for the bridge projects proposed and implemented by various wings of the Highways Department.

Design divisions functioning at Headquarters carry out the design works.

The field works are being carried out by the Investigation Divisions.

## **9.1 Investigation Divisions and their Activities:**

The eight investigation divisions with their Headquarters at Chennai, Villupuram, Tiruchirappalli, Madurai, Tirunelveli, Salem, Coimbatore and Tiruppur undertake the following field works:

### **9.1.1 Field Investigation:**

- Detailed investigations at bridge sites and collection of field data.
- Obtaining required particulars from the Public Works Department for River Bridges and from the Railways for Railway Over Bridges and Railway Under Bridges.

### **9.1.2 Sub-Soil Investigation for Foundation Design:**

- Sub-soil investigation through exploratory bores to arrive at the bearing capacity of the sub-soil to design the foundation of the bridges.

### **9.1.3 Preparation of Reports and Drawings:**

- Recommending suitable proposals based on field and sub-soil investigations.
- Preparation of cross sectional and longitudinal sectional drawings along the stream & alignment and arriving at hydraulic particulars.
- Preparation of alignment drawings and specification

report for the proposals and obtaining approval for the feasible proposals.

- Preparation of site plans and details for the works of formation of new bypasses and link roads.

## **9.2 Designs Divisions and their Activities:**

The activities of designs divisions are as follows:

- Preparation of designs, drawings, quantity estimates and technical guidance for River Bridges, Railway Over Bridges, Railway Under Bridges and Grade Separators and other Highway structures, costing more than two crore.

- Scrutinizing the alternative designs furnished by the contractors and according approval.
- Checking the Detailed Project Reports prepared by the consultants who are engaged by the various wings of the Department.
- Re-designing the bridges if there is any change in alignment and in Railway proposals.
- Re-designing the foundations of bridges and other bridge components, if warranted, in accordance with the sub-soil conditions during execution.
- Scrutinizing and giving recommendations to facilitate issue of permits for non-standard heavy motor vehicles to ply on roads based on the rules prescribed.

- Scrutinizing and according approvals for the structural design of bridges to be constructed by other Departments.

### **9.3 Works completed in 2012-2013:**

In 2012-2013, Preparation and Proof Checking of design and drawings for 8 Railway Over Bridges, 15 River Bridges, one Railway Under Bridges, one Grade Separator, 7 Foot Over Bridges and 11 design modifications totalling 43 Bridge works have been completed by the Design Divisions.

### **9.4 Works to be taken up in 2013-2014**

In 2013-2014, it is proposed to collect field particulars and prepare designs for 38 ROBs, 6 RUBs, 14 River Bridges, 5 Grade Separators, 3 design modifications

and 4 Flyovers totalling 70 works. The detailed project reports to be prepared by the consultants will also be taken up for proof checking.

### **Design Works Completed in 2012-2013**

<b>S. No.</b>	<b>Name of work</b>
	<b>River Bridges</b>
1.	Construction of bridge at Km 88/400 of Sadras - Chengalpattu - Kancheepuram - Arakkonam - Thiruthani Road across Kallar river (SH 58).
2.	Construction of bridge at km 6/2 of Agaram-Seegur -Thamaraipoondi road (via) Anganur - Sannasinallur road
3.	Construction of major bridge at km 54/8 Thoothukudi - Tiruchendur - Kanyakumari road
4.	Construction of major bridge at km 3/10 of Thoothukudi-Tiruchendur- Kanyakumari road
5.	Construction of major bridge at km 90/2 of Thoothukudi-Tiruchendur- Kanyakumari road



6.	Construction of High level bridge across Amaravathi river located near Pasupathipalayam in the link road joining km1/2 of Karur - Vangal road (MD772) and km 213/4 of Nagapattinam- Gudalore - Mysore road (SU115)
7.	Construction of High level bridge at Km 94/2 94/660 of Malliyakarai - Rasipuram - Thiruchengode - Erode road near Pallipalayam across Cauvery River Namkkal District.
8.	Reconstruction of bridge across Chittar in lieu of existing narrow and distressed bridge at km25/4-6 of Shenkottai - Pavoorchatram road(via) Surandai
9.	Construction of bridge at km 33/10 of Virudhachalam -Ulundurpet- Villupuram road across Gedilam river.
10.	Reconstruction of High level bridge at km 4/4 Of Karisalkulam Kalingapatti road across Nitchobanathi.
11.	Construction of High level bridge at km17/4-6 Of Rajapalayam - Vembakottai road
12.	Construction of High level bridge at km 13/4-13/6 of Devathanapatti -Varusanadu road.

13.	Construction of High level bridge at km 10/2 of Pulikarai -Mukkulam road in lieu of existing piped causeway.
14.	Construction of bridge at km 2/0 of Ariyalur-Vilankadupakkam road to Manali - Mathur via - Kosapur.
15.	Construction of High level bridge at km 11/2 of Annur - Sirumugai road.
	<b>Grade Separators</b>
1.	Construction Grade Separator at km 113/2 of Arcot Villupuram road
	<b>Railway Under Bridges</b>
1.	Construction of RUB in lieu of existing LC.No:66 Melathur - Valathur Railway station near Railway yard at Railway km158/26-28
	<b>Railway Over Bridges</b>
1.	Construction of ROB at km 50/220 of NH-67 in lieu of existing LC.No:22 at Railway Km 31/3-4 between Needamangalam - Koradachery Railway Stations.
2.	Construction of ROB at km 393/44-45 in lieu of existing LC.No:124 at km 0/2 of Erode in between Erode and Thottipalayam Stations.

3.	Construction of ROB in Municipal Road (No.1 Trichy Road ) of Thanjavur Town in lieu of existing LC No.304 at Railway km 354/4-5 in between Thanjavur Railway Station and Railway yard.
4.	Construction of ROB at km 203/2 of Thanjavur -Pattukottai-Aranthangi Karaikudi-Kallal-Kalayarkoil Maravanmangalam - Illankudi-Paramakudi- Mudukulathur - Sayalkudi-Road(SH29) in lieu of existing LC.No:473 in Railway km 578/600-700 in between Manamadurai and Paramakudi Railway Stations.
5.	Reconstruction of ROB @ km 0/2 of MSP camp road near Thiruchirappalli Railway station in lieu of existing old Railway Bridge No. 1136 @ Railway Km 340/4-5 in between Thiruchirappalli - Poongudi Railway Station (Trichy).
6.	Construction of ROB at km 314/10 of Chennai-Tiruchirappalli-Dindigul road (Old NH 45) in lieu of Old railway bridge No.380A at Railway km 329/8-9 in between Trichy town and Srirangam Railway Station.

7.	Construction of ROB in lieu of LC No.118A at km 357/500-600 near Sengulam in between Melappalayam and Sengulam Stations.
8.	Construction of ROB in lieu of existing LC.No:16 at Railway km38/22-24 near Putlur Railway station at km1/8 of TRTC road to Putlur Road.
	<b>Foot Over Bridges</b>
1.	FOB at km 1/2 of velachery bye pass road (Near Rathna cafe).
2.	FOB at km 24/100 of GST road near MEPZ.
3.	FOB at km 2/6 of Taramani Link Road near Perungudi Junction.
4.	FOB at km 1/2 of Taramani Link Road near TCS.
5.	FOB at km 22/900 of GST road near Chrompet GH.
6.	FOB at km 10/6 of Inner Ring Road (Near SBOA School).
7.	FOB at km 7/7 of GWT road near Vaishnava college.
	<b>Modification works</b>
1.	Forming approaches to ROB at km 151/4 of NH 209 (Echanari) – LC.No:150

2.	Construction of bridge across the Narasimma river at km8/8 of Bramadesam-Renganathapuram road (via) Kiliyanur Villupuram District.
3.	Construction of ROB at km 0/2 of Madurai – Kanyakumari road in lieu of existing LC No.366 at Railway km 496/10-497/1 at Palanganatham between Madurai junction and Thiruparankundram Railway Stations
4.	Construction of a new bridge @ km 0/6 of Vairamangalam - Thalavaipettai road across the Bhavani river
5.	Construction of High level bridge between Mohanur in Namakkal District -Vangal in Karur District across the river Cauvery
6.	Construction of ROB at km 0/10 of Salavathi road in lieu of existing LC.No:93 at Railway km 124/2-3 in between Olakur – Tindivanam Railway station
7.	Construction of High level bridge across the Cauvery river between Kokkarayanpettai – Lakkapuram including approaches upto Karur road km 0/0-2/2

8.	Construction of High level bridge across the Coleroon River connecting Muttam village in Cuddalore District and Manalmedu in Nagapattinam District.
9.	Construction of ROB at km 0/8 of Tenkasi - Madurai road in lieu of existing LC.No:502 at Railway km 660/8-9 between Tenkasi - Senkottai Railway Stations.
10.	Providing High level bridge across the Coovam river at the road connecting GWT road at km 11/2 and Mugappair.
11.	Construction of two lane bridge across the river Adayar adjacent to the existing Thiru-Vi-Ka-Bridge.

## List of works to be taken up for the year 2013-2014

Sl. No.	Name of Work
<b>River Bridges</b>	
1	Construction of High level bridge at km 14/8 of Radhapuram - Ramankudi road across the Nambiyar river
2	Reconstruction of High level bridge across the Coleroon @ km 312/3-313/0 of Chennai - Trichy - Dindigul road
3	Reconstruction of Major bridge at km 104/2 of NH45 A ( Villupuram - Pondy - Nagapattinam road )
4	Construction of High level bridge at km 77/6-77/8 of Vathalagundu - Peraiyur - Kariapatti road (SH 154)
5	Construction of High level bridge at km 106/2-4 of Srivilluputhur - Sivakasi - Virudhunagar -Aruppukkottai - Thiruchuli - Narikudi - Parthibanur road
6	Construction of Additional three lane bridge across the Coovam river Aminjakarai in EVR Salai.

7	Construction of Bridge across the Swetha River at km 21/4 of Krishnapuram, Poolampadi - Kallapatti Road
8	Construction of High level bridge across Mettur Elis surplus water channel at km 33/8-33/10 of Thoppur - Mettur - Bhavani - Erode Road
9	Construction of Bridge across Thirumanimutharu at km 3/10 of Vaiyappamalai- Ramapuram Road.
10	Construction of High level bridge across Veppadaiyar at km 0/4 of V.Muthampatti - Govindapuram Road.
11	Construction of Bridge across the Amaravathi River connecting Melapalayam Koyampalli.
12	Construction of Bridge across the Noyyal river connecting Karur District Athipalayam and Erode District Elunuthimangalam.
13	Construction of High level bridge in lieu of existing piped cause way at km 6/4 of Udumalaipettai Kumaralingam road.
14	Construction of High level bridge at km 8/4 of Nerkuppai - Kandavaraiyanpatti Road.



<b>Fly Overs</b>	
1	Construction of Fly Over at CMC junction in Vellore.
2	Construction of Fly Over along Athupalam and Ukkadam junction upto Oppanakara street in Coimbatore.
3	Construction of Fly Over near Panneerselvam Park at Erode (Revision)
4	Fly Over proposal near VVD junction at km 2/10 of Thoothukudi - Quilon road .
<b>Grade Separators</b>	
1	Construction of Grade Seperator in Dr.Nanjappa road (Sathya Mangalam road) including pedestrian subway and second level flyover at the junction of cross cut road and 100 ft road at Gandhipuram area in Coimbatore city
2	Construction of Grade Separator at the intersection of Tharamani and Velachery Road and Velachery Bye-pass road at Velachery Vijayanagaram.
3	Construction of Grade Separator at the intersection of Sembiam (Perambur ) Red Hills Road with Inner Ring Road at Kolathur near Errattai Eri.

4	Construction of Grade Separator at the intersection of Sandhai Road and Kundrathur Road with GST Road at Pallavaram in Chennai City.
5	Construction of Grade Seperator at the intersection of Kaliamman koil Street and city bus entrance of CMBT at Koyambedu.
<b>Railway Under Bridges</b>	
1	Construction of RUB in lieu of LC No.81 near Vaniyambadi (Railway Station Yard) at km 196/36-198 in between Vaniyambadi - Ketharpatti Railway Station (New Town Road)
2	Construction of RUB in lieu of LC No.70 at Railway way km 4/8 of Ulli -Valathur road.
3	Construction of LUS in lieu of existing LC No.486 and 487 @ Rly Km 652/700-800 and 653/300-300 between Milavittan and Tuticorin Railway Stations.
4	Construction of LUS at km 6/8 of Suramangalam - Tharamangalam in lieu of existing LC No.113 at Railway km 332/8-10 in between Salem junction and Magnesite Railway station.
5	Construction of RUB in lieu of existing LC No.22 at Railway km 21/10-11 near Thrisoolam Railway Station (G.O Ms No 176, Highways (HQ2) Dept, Dt 05.10.2000)

6	Construction of LUS at km 0/4 of Dindigul-Gujiliamparai-Karur road in lieu of existing Lc No.6 at Railway km 3/200-300 in Dindigul and Akkaraipettai.
<b>Railway Over Bridges</b>	
1	Construction of ROB at Km 1/6 of Neelikondampalayam SHIS colony road in lieu of existing LC No.5 at Rly Km 3/21-23 in between Irugur-Peelamedu Railway Stations
2	Construction of ROB at km 158/8 of Old NH45 Road passing through Villupuram Town in lieu of existing LC No.2 at Railway km 2/2-3 in between Villupuram and Venkatesapuram Railway Station.
3	Construction of ROB at km 1/2 of Mannarai - Thottimannarai road in lieu of L.C:131 at Railway km438/4-6 in between Uthukuli and Tiruppur Stations.
4	Construction of ROB in lieu of existing LC No 86 at Railway km 211/4-6 between Jolarpet and Kethandapatti Railway Stations

5	Construction of ROB in lieu of existing LC No,4 at km 153/10 of Madurai - Kanyakumari Road (NH 7) at railway km 4/8-9 in between Tirunelveli and Seithunganallur Railway Station.
6	Construction of ROB in lieu of existing LC No 40 at Railway km 40/1-2 in between Vandalur and Guduvanchery Railway Station
7	Construction of ROB in lieu of existing LC No 54 in between Chengalpet and Thirumani Railway stations at km 27/2 of Sethurangapattinam - Kancheepuram road in Chengalpet Town.
8	Construction of Railway Over Bridges at km 0/2 of Ramanathapuram - Keelakkarai road in lieu of existing LC No.501 between Ramanathapuram-Uchupuli Road.
9	Construction of Railway Over Bridges at km 0/8 of Sholavandhan-Valayapatti (via Andipatty) in lieu of existing LC No.346 at Rly Km 473/500-600 in between Madurai-Dindigul Railway Station.
10	Construction of Railway Over Bridges at km 375/2 of BCC Road in lieu of existing LC No.8 at Railway km 5/700-800 in between Dindigul-Akkaraipettai Railway Station.

11	Construction of Railway Over Bridges at km 0/8 of Palayamkottai - Sivanthipatti road in lieu of existing LC No.6 at Railway km 6/600-700 in between Palayamkottai-Seithuganallur Railway Station.
12	Construction of ROB at Km 27/6 of V.K.T Road in lieu of existing LC No.135A at Railway km 82/1-2 of Villupuram-Trichirapalli junction main line (Thiruthuraiyur-Panruti)
13	Construction of ROB in lieu of LC No.78 at km 186/12-14 in between Ambur and Vinnamangalam Stations.
14	Construction of ROB in lieu of LC No.80 at Railway km 195/28-30 in between Valayampettai and Vaniyambadi Road.
15	Construction of ROB in lieu of LC No.13 at km 31/12-14 in between Thirunindravur and Veppambattu Stations.
16	Construction of ROB in lieu of LC No.16 at km 24/16-18 in between Minjur and Nandiyambakkam Railway Station in Minjur – Kattur – Thirupalaivanam Road.

17	Construction of ROB in lieu of LC No.126 at km 149/900-150/0 at Vellore Yard and proposed under bridge in lieu of LC No.127 at km 150/600-700 in between Vellore Contonment and Katpadi junction.
18	Construction of ROB in lieu of LC No.59 at km 68/10-11 near Ottivakkam Station in between Chengalpet and Ottivakkam Stations.
19	Construction of ROB in lieu of LC No.29 at Rly. km 2/10 near Chennai-Ponnerikarai - Kancheepuram.
20	Construction of ROB in lieu of LC No.64 at km 81/2-4 near Karunguzhi Railway Station in between Padalam & Karunguzhi Railway Stations.
21	Construction of ROB in lieu of LC No.75 at km 97/15-16 in between Pakkam - Acharapakkam Stations in Acharapakkam - Periakalakadai Road.
22	Construction of ROB in lieu of LC 88 at km 114/4-6 in Olakkur -Tindivanam Railway Station at km 1/6 of Olakkur Feeder Road.
23	Construction of ROB in lieu of LC No.102 at km 134/28-30 in Mailam Yard

24	Construction of ROB in lieu of LCNo.111 at km 0/4 of Vikravandi – Nemur Road at Railway km 150/7-8 in between Vikravandi and Mundiampakkam Railway Stations.
25	Construction of ROB in lieu of existing LC No.308 at km 431/0-100 in between Tamaraipadi and Dindigul Stations. LC No.27 at km 72/200-300 between Erode and Dindigul Stations and LC No.2 at km 1/10-11 between Dindigul and Akkaraipatti Station
26	Construction of ROB in lieu of existing LC No.184 at Railway km 190/300-400 and LUS in lieu of LCNO 185 at km 190/400-500 near Salem Town in between Salem Market and Salem Town Station.
27	Construction of ROB at km 2/2 of Salem new Bypass in lieu of existing LC No.183 Railway km 189/400-500 between Salem Town and Salem Railway Station
28	Construction of ROB in lieu of LC No.187 at km 192/300-400 near Salem junction in between Salem Market and Salem junction at km 203/2 of VCC Road.
29	Construction of ROB in lieu of LC No.3 at km 2/9-11 in between Irugur and Coimbatore Station.

30	Construction of ROB in lieu of LC No.10 at km 25/6-7 near Karamadai in between Coimbatore North and Karamadai Stations.
31	Construction of ROB in lieu of LC No.3 at km 2/1-2 near Pollachi in between Pollachi Anamalai road Stations.
32	Construction of ROB in lieu of LC No.162 at km 160/3 near Podanur Junction in between Podanur junction and Pollachi Station.
33	Construction of ROB in lieu of LC No.32 and 33 in between Tambaram-Vandalur Railway Stations near Úrungalathur Railway Stations.
34	Construction of additional two lane ROB at km 162/400-163/300 of NH 209 near Textool (Ganapathy) in Coimbatore
35	Construction of ROB at km 7/6 of Keelvithi-Ameerpet road in lieu of existing LC.No.37 at Railway km 80/6-8 near Anvarthiganpet Railway Station.
36	Construction of Railway Over Bridge at km 21/6 of Cuddalore - Chittur road in lieu of existing LC No.138 at Railway km 185/3-4 in between Panrutti and Nellikuppam Railway Stations.



37	Construction of Railway Over Bridge at km 0/4 of Cauvery road in lieu of existing LC No.249 at Railway km 331/7-8 in between Srirangam and Trichy Town Railway Stations.
38	Construction of ROB in Hanumanthanager @ Dindigul town in lieu of existing L.C. NO: 309 in Railway km 431/900 to km 432/000 in Dindigul yard.
<b>Modifications</b>	
1	Reconstruction of High Level Bridge connecting km 0/8 of Sadras - Chengalpet-Kancheepuram-Arakkonam -Thiruthani Road.
2	Construction of major Bridge across Vellappallam Uppanar river at km 0/4 of Thirumullaivasal to Keelamoovakarai road km 0/0-2/0.
4	Construction of ROB in lieu of existing LC No 47 in between Guduvancherry- Singaperumalkoil Railway station

## **10. Tamil Nadu Road Infrastructure Development Corporation (TNRIDC)**

The TNRIDC was incorporated under Section 25 of the Companies Act, 1956 as a non-profit organization on 04.03.2005 to formulate, undertake, improve, upgrade and maintain the road infrastructure. It is incharge of implementing Oragadam Industrial Corridor Project.

### **10.1 Oragadam Industrial Park Infrastructure Development Scheme Phase-I:**

Considering the speedy development of Industries in and around Sriperumpudur in Kancheepuram District, it was decided in the year 2005-06 to improve the road infrastructure facilities in Oragadam Industrial Park at an estimated cost of Rs.300 Crore, and the scheme is under

implementation with the revised estimated cost of Rs.462 Crore.

The following works were taken up for implementation in the first phase:

- a.** Singaperumalkoil - Sriperumpudur road (SH-57) (24.60 Km) – Widening the road from single lane to four lane.
- b.** Vandalur – Wallajabad road (SH-48) (33.40 Km) – Widening the road from two lane to four lane.
- c.** Construction of a Grade Separator at Oragadam junction on the Vandalur-Wallajabad road.

These four laning road works were taken up in four packages as indicated:

- i. From Singaperumalkoil to Oragadam - 12.60 km

- |              |   |                   |
|--------------|---|-------------------|
| ii.          | From Oragadam to Sripurumpudur (Including formation of Bypass to Ponthur village for a length of 2.39 Km) | - 12.00 km        |
| iii.         | From Vandalur to Oragadam   | - 16.60 km        |
| iv.          | From Oragadam to Wallajabad   | - 16.80 km        |
| <b>Total</b> |   | <b>- 58.00 km</b> |

The road works in the first phase have been completed for a length of 42 Km out of 58 Km. Out of 166 cross drainage works, 122 works have been completed.

The work of construction of a Grade Separator at Oragadam junction at a cost of Rs.21 Crore was commenced during April 2010 and so far executed for a value of Rs.17 Crore and the remaining work is in progress. The total expenditure incurred for the Oragadam Industrial Corridor Project till date is Rs.330 Crore which

includes the expenditure of Rs.134 Crore for Land acquisition.

The Land acquisition process is expected to be completed in April 2013 and all the works in the first phase are likely to be completed by 30.06.2013.

The Government have entrusted the work of "Widening the stretch from 12/6 to 24/6 in Singaperumalkoil - Sriperumpudur road from 4 lane to 6 lane" (to a length of 12Km) at an estimated cost of Rs.86.65 Crore to TNRIDC vide G.O.Ms.No.40, Highways & Minor Ports (HS1) Department, dated 01.03.2011 under Phase-II for which tenders were invited in January 2013, and the same is under evaluation. This work is expected to commence in the first quarter of 2013-2014.



Ongoing Grade Separator work at Oragadam under the Industrial Corridor Project.





Ongoing Bypass work at Pondhur near Sriperumpudur under the Industrial Corridor Project.





## **11. Tamil Nadu Road Sector Project**

The chronology of the TNRSP I Project is detailed below:

- October 1994: A Mission of the World Bank visited the State Mission, reviewed the Strategic Options Study (SOS) undertaken for about 3200 Km by the Highways Department, Government of Tamil Nadu (GoTN).
- 1995: Strategic Options Study (SOS) was carried out by the Highways Department.
- April 1997: M/s.Kinhill Engineers Pvt. Ltd was engaged as the Project Coordinating Consultant.
- 1998: The TNRSP I Project Implementation Unit (PIU) was formed by the GoTN vide G.O (Ms) No.115 dated 15.05.1998.

- 1999: M/s. Booz Allen and Hamilton INC Virginia USA was engaged for Consultancy Services to the Institutional Development Study by the Government of Tamil Nadu in G.O No.93 dated 23.03.1999.
- 2003: The Government of Tamil Nadu issued its administrative sanction for the TNRSP I vide G.O Ms.No.62 dated 08.04.2003.
- 2003: The World Bank issued the Project Appraisal Document (PAD) on a proposed loan to India for the TNRSP.
- 2003: The loan agreement was signed.
- 2005 to 2011: All Contracts of TNRSP I were executed.

Following are the major project components implemented under the loan granted by the World Bank.

### **11.1 Road Upgrading Component:**

This component primarily aimed to improve the capacity of the state road network through the widening and strengthening of about 750 km of existing State Highways including 13 bypasses. Appropriate environmental mitigation and resettlement action plans developed for these works have been implemented.

<b>Contract No.</b>	<b>Nomenclature</b>	<b>Length in Km</b>	<b>Cost Rs. in Crore</b>
TNRSP01	Upgrading of roads from Arcot to Ulundurpettai (Elavanasur), Polur – Chengam, Vriddhachalam - Thiruvarur,	377.36	520.70

<b>Contract No.</b>	<b>Nomenclature</b>	<b>Length in Km</b>	<b>Cost Rs. in Crore</b>
	Jayakondam – Ariyalur, and new bypass roads at Chidambaram, Sirkazhi, Arani, Polur, Thiruvannamalai, Thirukkovilur, Vriddhachalam, Ariyalur and Thiruvarur.		
TNRSP02	Upgradation of Road from Nagapatinam to Katumavadi	117.40	224.00
TNRSP03	Upgradation of Road from Kattumavadi to Ramanathapuram	99.90	207.00
TNRSP04	Upgradation of Road from Ramanathapuram to Tuticorin	114.67	152.00

<b>Contract No.</b>	<b>Nomenclature</b>	<b>Length in Km</b>	<b>Cost Rs. in Crore</b>
TNRSP05	Construction of Ramanathapuram Bypass	10.40	37.03
TNRSP05A	Construction of Kumbakonam Bypass Extension	4.10	20.79
TNRSP06	Reconstruction of Tsunami Affected Bridge Connecting Keezhamanakudi – Melamanakudi Villages in Kanyakumari District		21.30
	<b>Total</b>	<b>723.83</b>	<b>1182.82</b>

Of the 724 km roads, 723 km of road works were completed and the remaining one km length of the Kumbakonam bypass will be completed by July 2013.

Thirteen bypasses had been taken up, of which twelve have been completed. One work in progress and will be completed during this year.

Eleven Railway Over Bridges had been taken up in the thirteen bypasses, of which nine Railway Over Bridges have been completed. Two works at the Kumbakonam bypass and the Ramanathapuram bypass are under execution by the Railways as deposit works.

The reconstruction of the Tsunami affected bridge between Keezhamanakudi and Melamanakudi villages at a contract price of Rs.21.30 Crore has been completed and was inaugurated by the Hon'ble Chief Minister on 30.1.2013.

## **11.2 Road Maintenance and Safety Works component:**

Enhanced road maintenance works to the length of 1,033 Km in the State Highways and Major District Roads (MDR) were taken up for execution in four phases at a cost of Rs.430 Crore and completed.

## **11.3 Institutional and Policy Strengthening Component:**

### **➤ Institutional Development Strategy:**

A post of the Director General, Highways Department was created and is now functional. Also, through Institutional Development Strategy restructuring of the Department and staff pattern have also been implemented.

### **➤ Computerization**

To strengthen the administrative machinery, computers were procured for all



the Wings of the Highways Department. Internet facilities were also provided to monitor the progress of the project.

➤ **Road Accident Data Management System (RADMS)**

A web based Road Accident Data Management System (RADMS) has been jointly implemented by the Police and Transport Departments. The accident details are collected at the site and registered in the computers by the Police, Highways and Transport departments. The data collected is analyzed and preventive measures are being taken up by the concerned Department.

➤ **Road Management System (RMS)**

For scientifically prioritizing road maintenance and improvement, a computerized Road Management System

has been developed. This web based software application functions as the repository of the Core Road Network data and as a maintenance management tool.

➤ **Road Safety Audit**

Road Safety Audit for TNRSR I upgraded roads for 724 Km have been taken up and completed. Improvements are proposed for incorporation in the maintenance works.

➤ **Road Safety Awareness**

Consultancy services for road safety awareness programme have been conducted under supervision of the Institute of Road Transport, Chennai.

➤ **Geographical Information System (GIS)**

The consultant M/S Pixel Softek Pvt. Ltd has been appointed to create a GIS for

Highways Department. Using the Survey of India (SOI) map, the digital base map for Tamil Nadu has been created. RMS data has been integrated with GIS and the integrated e-Pathai software was launched by the Hon'ble Chief Minister.

➤ **Advanced Data Collection Equipment**

The supply and installation of two advance data collection equipment at a cost of Rs.1.50 Crore each has been completed. Data collection is currently in progress.

These equipments were inaugurated by the Hon'ble Chief Minister on 27.01.2012.

➤ **Project, Human Resources & Finance Management System:**

This software has been customized to suit the requirements of the Highways Department so as to monitor the physical

and financial activities of the projects in addition to establishment related activities department by utilizing the services of M/s.CMC Ltd. The implementation part of this software is in progress.

➤ **International Standards Organization**

The ISO 9001:2008 certificates for two Circles and three Divisions have been obtained.

➤ **Performance Based Maintenance Contracts**

The World Bank has approved the following roads under PBMC for 5 years continuous maintenance on a pilot basis and the agreement was signed on 03.09.2010. Since some of the roads are proposed under TNRSP Phase II for PPP and Upgrading and PBMC, the contract has been terminated on 31.03.2013 and the roads

will be handed over to the Chief Engineer (H), C&M, for further maintenance. Following is the list of roads.

<b>Sl. No.</b>	<b>Nomenclature</b>	<b>Total length in Km</b>
1.	Thoppur – Mettur – Bhavani – Erode Road km 0/0 – 94/0 – (SH 20)	94.00
2.	Omalar - Mecheri Road km 0/0 – 14/6 (MDR)	14.60
3.	Omalar – Sangagiri – Tiruchengode - Paramathy Road 0/0 – 81/0 (SH 86)	81.00
4.	Salem – Arur-Tirupathur – Vaniyambadi road (SH 18)	106.40
	Total	296.00

### ➤ **Public Private Partnership (PPP)**

The Tamil Nadu Road Sector Project under the World Bank has taken up the Public-Private-Partnerships (PPP) study under Pre Investment Study Option for the following State Roads.

1. Mettur – Pallakkanuthu – Oddanchatriram – Dharapuram – Tirupur Road (SH 174).
2. Erode – Dharapuram Road (SH – 83A)
3. Arcot Bye-pass Road
4. Erode Outer Ring Road Phase – II
5. Chennai Outer Ring Road Phase – II.

Besides the above, pre feasibility study of the Chennai Outer Ring Road was also taken up and implemented. G.O.Ms.No.10 Highways & Minor Ports (HN2) Department dated 23.01.2012 has been issued to execute the work of Chennai ORR Phase II on the same model as Chennai ORR Phase I (Annuity besides 20% Project Support Fund) with the TNRDC as Management Associate.

#### **11.4 Tamil Nadu Road Sector Project II (TNRSP II):**

The Tamil Nadu Road Sector Project has carried out a Strategic Option Study II (SOS II) to identify and prioritize road

improvement works to be taken up under the TNRSP Phase II. The Indian Institute of Technology Madras (IITM), Chennai was appointed as a Consultant to carry out the SOS II and IITM has furnished its report.

Based on the Strategic Option Study II (SOS – II) taken up under TNRSP I, the roads have been identified and the TNRSP II unit has been formed from 01.04.2013.

The Project proposal for TNRSP II based on the outcome of SOS-II was submitted to Department of Economic Affairs (DEA) and the same had been reviewed by Ministry of Road Transport and Highways (MoRTH) and DEA. After the review, MoRTH vide its letter dated 05.06.2012 has given its 'in-principle'

approval for TNRSP II and the same has been forwarded to the DEA.

- The Project proposal consists of improvements to a length of 1678 km at a cost of Rs. 8583 Crore.

<b>S. No</b>	<b>Description</b>	<b>No. of Roads</b>	<b>No. of Links</b>	<b>Length in Km</b>	<b>Cost in Rs. Crore</b>
1	PPP roads	13	23	678.51	4235
2	EPC roads	15	33	998.78	4348
	Total	28	56	1677.29	8583

- The proposal was presented before the Screening Committee of DEA on 31.08.2012 and on acceptance of the proposal, the DEA recommended the TNRSP Phase II to the World Bank for an IBRD loan assistance of US\$ 300 M.
- World Bank acceptance for the proposal was made on 09, Nov 2012 and the project



identification mission team visited the Tamil Nadu Road Sector Project during November 14-17, 2012 to review the proposal for project preparation of TNRSP II.

- Government has approved the Action Plan of Tamil Nadu Road Sector Project Phase II on 05.12.2012 as suggested by the World Bank during its Project Preparation Mission November 14-17, 2012.
- The Hon'ble Chief Minister approved the sanction of Rs.65 Crore for the TNRSP II Project Preparatory Fund, in the first meeting of the Tamil Nadu Infrastructure Development Board on 04.02.2013
- The Request of Expression of Interest (REOI) published on

15.02.13 for consultancy services of project preparation of TNRSP II.

### **11.5 List of roads taken up by the TNRSP II:**

<b>S. No.</b>	<b>SH No.</b>	<b>Name of the road</b>	<b>Length of road in Km</b>
1	18	Salem - Thirupathur - Vaniyambadi Road Km.93/6-106/4	12.80
	18	Salem - Thirupathur - Vaniyambadi Road Km.69/0-93/6	24.60
	18	Salem - Thirupathur - Vaniyambadi Road Km.0/0-16/16	16.16
	18	Salem - Thirupathur - Vaniyambadi Road Km.16/16-69/0	52.84
2	113	Kodambakkam-Sriperumbudur Road Km 0/0-28/8	28.80
3	25	Trichy-Namakkal Road Km 0/0-77/4	81.90
4	37	Mettur-Pallankanuthu-Oddanchatram-Dharapuram-Kangeyam-Tiruppur road Km 0/0-32/0	32.00
	37	Mettur-Pallankanuthu-Oddanchatram-Dharapuram-Kangeyam-Tiruppur road Km 37/4-95/2	59.50

<b>S. No.</b>	<b>SH No.</b>	<b>Name of the road</b>	<b>Length of road in Km</b>
4	37	Mettur-Pallankanuthu-Oddanchatram-Dharapuram-Kangeyam-Tiruppur road Km 95/2-126/2	31.00
5	86	Omalur - Sankari-Thiruchengode-Paramathy road Km 0/0-45/2	46.00
	86	Omalur - Sankari-Thiruchengode-Paramathy road Km 45/2-80/10	34.90
6	MDR	Omalur - Mecheri Road Km 0/0-14/6	14.60
7	15	Ooty-Kothagiri-Mettupalayam-Sathy- Gobi-Erode road Km 58/2-82/0	23.80
	15	Ooty-Kothagiri-Mettupalayam-Sathy- Gobi-Erode road Km 0/0-57/6	57.60
	15	Ooty-Kothagiri-Mettupalayam-Sathy- Gobi-Erode road Km 101/6-153/4	51.80
	15	Ooty-Kothagiri-Mettupalayam-Sathy- Gobi-Erode road Km 153/4-161/62	8.22
8	79	Malliyakarai - Rasipuram - Trichengode -Erode Road Km 0/0-94/66	96.06

<b>S. No.</b>	<b>SH No.</b>	<b>Name of the road</b>	<b>Length of road in Km</b>
9	116	Kanchipuram-Vandavasi Road Km 0/0-39/8	39.80
10	20	Thoppur - Mettur - Bhavani - Erode Road Km 0/0-93/98	93.98
11	10	Cuddalore-Virudhachalam-Salem Road Km 93/2-111/15	17.95
	10	Cuddalore-Virudhachalam-Salem Road Km 0/0-93/2	93.20
12	111	Madavaram-Redhills Road Km 0/0-9/6	9.60
13	179	Kanyakumari-Pazhaya Uchakadai Road(West Coast Road) Km 0/0-71/52	71.52
14	9	Cuddalore-Chittoor Road Km 84/7-114/0	29.30
	9	Cuddalore-Chittoor Road Km 38/2-84/8	46.60
15	4	Arcot-Villupuram Road Km 53/9-110/2	56.30
	4	Arcot-Villupuram Road Km 113/2-114/6	1.40
	4	Arcot-Villupuram Road Km 18/0-53/9	35.90

<b>S. No.</b>	<b>SH No.</b>	<b>Name of the road</b>	<b>Length of road in Km</b>
16	82	Sathi - Athani- Bhavani road Km 0/0-28/8	28.80
	82	Sathi - Athani- Bhavani road Km 28/8-30/2	1.40
17	83A	Erode-Dharapuram road Km 0/0-30/6	30.60
	83A	Erode-Dharapuram road Km 30/6-62/6	32.00
	83A	Erode-Dharapuram road Km 62/6-74/65	12.05
	83A	Erode-Dharapuram road Km 77/05-80/2	3.15
18	44	Paruvakudi-Kovilpatti- Ettayapuram-Vilathikulam- Vembar Road Km 0/0-39/2	39.20
	44	Paruvakudi-Kovilpatti- Ettayapuram-Vilathikulam- Vembar Road Km 39/2-97/0	57.80
19	58	Sadras-Chengalpattu- Kancheepuram-Arakkonam- Thiruthani Road Km 0/0-27/2	27.20
	58	Sadras-Chengalpattu- Kancheepuram-Arakkonam- Thiruthani Road Km 28/8- 78/95	50.15

<b>S. No.</b>	<b>SH No.</b>	<b>Name of the road</b>	<b>Length of road in Km</b>
20	127	Pallikonda-Palamaneri Road Km 0/0-1/2	1.20
	127	Pallikonda-Palamaneri Road Km 1/2-7/4	6.20
	127	Pallikonda-Palamaneri Road Km 7/4-28/8	21.40
21	66	Kumbakonam-Mannargudy- Adhiramapattinam Road Km 0/0-9/2	9.20
	66	Kumbakonam-Mannargudy- Adhiramapattinam Road Km 49/8-75/2	25.40
	66	Kumbakonam-Mannargudy- Adhiramapattinam Road Km 9/2-49/8	40.60
22	104	Chennai-Pulicat Road Km 0/0-25/5	25.50
23	146	Mannargudi- Sethubhavachatram Road Km 0/0-10/6	10.60
	146	Mannargudi- Sethubhavachtram Road Km 10/6-51/4	40.80
24	29	Thanjavur-Pattukottai- Aranthangi-Karaikudi-Kallal- Kalaiyarkoil- Maravamangalam- Illayankudi-Paramakudi- Muthukulathur-Sayalkudi Road Km 69/2-115/11	45.91
		<b>Total</b>	<b>1678.00</b>

- It is expected that, the final Detailed Project Report (DPR) will be ready for execution of works by May 2014
- Signing of loan agreement with World Bank is expected by June 2014

## **11.6 Performance Based Maintenance Contracts**

As per the agreed action plan to World Bank by Government of Tamil Nadu on 05.12.2012, the TNRSP Phase I upgraded roads will be brought under the PBMC components of TNRSP II. Procurement of the consultant for project preparation is under progress in two components as follows:

### **PBMC Component I**

<b>S.No.</b>	<b>Name of Road</b>	<b>Length in Km</b>
	<b>TNRSP 01</b>	
1	Arcot – Arni	24.620
2	Arni bypass	5.315
3	Arni – Polur	20.580

4	Polur – Chengam	45.192
5	Tiruvannamalai - Thirukkivilur	27.893
6	Tirukkivilur bypass	4.391
7	Tirukkivilur - Ulundurpet	27.050
8	Vridhachalam - Jayankondam	33.650
9	Vridhachalam Bypass	9.153
10	Sirkazhi Bypass	8.760
11	Chidambaram bypass	16.226
12	Ariyalur bypass	7.552
13	Jayankondam - Ariyalur	35.819
14	Kumbakonam - Tiruvarur	32.944
	<b>Total Length</b>	<b>299.145</b>

### **PBMC Component II**

<b>S.No.</b>	<b>Road Name</b>	<b>Length in Km</b>
	<b>Contract TNRSP 02</b>	
1	Manora to Kattumavadi	17.600
2	Muthupet to Manora and Muthupet Bypass	30.400
3	Tiruthuraipundi to Muthupet and Tiruthuraipundi Bypass	22.700
4	Nagapattinam to Tiruthuraipundi and Nagapattinam Bypass	46.700
	<b>Sub-total</b>	<b>117.400</b>



	<b>Contract TNRSP 03</b>	
5	Tirupalakudi - Ramanathapuram	19.000
6	Tondi – Tirupalakudi	25.900
7	Mimisal – Tondi	23.500
8	Kattumavadi - Mimisal	31.500
	<b>Sub-total</b>	<b>99.900</b>
	<b>Contract TNRSP 04</b>	
9	Ramanathapuram to Edampadal	25.490
10	Sayalkudi to Kulathur	38.540
11	Kulathur to Tuticorin	21.450
12	Edampadal to Sayalkudi	29.190
	<b>Sub-total</b>	<b>114.670</b>
	<b>Contract TNRSP 05</b>	
13	Ramanathapuram bypass	10.400
	<b>Total Length</b>	<b>342.37</b>

- Engagement of consultancy services for the Preparation of Detailed Project Reports for the implementation of Performance Based Maintenance Contract for the maintenance of roads in corridors TNRSP 01 & 05A (300 km)
- Engagement of Consultancy services for the Preparation of

Detailed Project Report for implementation of Performance Based Maintenance Contract for the maintenance of roads in corridors TNRSP 02, 03, 04 & 05 (343 km).

Consultant will be engaged shortly and Detailed Project Report is expected to be ready in 5 months time.





Bridge connecting Keelamanakudi and Melamanakudi in Kanniyakumari District  
inaugurated by the Hon'ble Chief Minister on 30.01.2013



## **12. Tamil Nadu Road Development Company Ltd**

Tamil Nadu Road Development Company Ltd, a joint venture company of the Tamil Nadu Industrial Development Corporation Ltd (TIDCO) and a Private Sector Infrastructure Leasing and Financial Services Ltd (IL&FS) was incorporated in 1998 for the implementation of major PPP projects by the Government of Tamil Nadu by mobilizing the required resources for the implementation of the Road Projects.

In November 2009, TIDEL Park Ltd (TIDEL) (Promoted jointly by TIDCO & ELCOT) completely acquired the equity shares of TNRDC held by IL&FS - the private sector company - and now TNRDC is a 50:50 joint venture company of TIDCO

and TIDEL, both of which are Government of Tamil Nadu undertakings.

The IT Expressway Ltd (ITEL), a special purpose Vehicle, for domiciling the IT corridor project and the subsidiary of the Tamil Nadu Road Development Company Ltd (TNRDC), was incorporated in 2004 with the share pattern of 77% by TNRDC and 23% by TIDCO.

### **12.1 Projects so far implemented by TNRDC:**

#### **East Coast Road (ECR) – Akkarai to Puducherry:**

As the ECR required immediate rehabilitation, the Government of Tamil Nadu assigned the work of improvement, operation and maintenance of ECR for a stretch of 113.2 km from Kudumiyandi Thoppu (Akkarai) to Koonimedu in Puducherry to TNRDC on a 31 year long

term basis and the Concession Agreement was signed on 22-12-2000.

TNRDC completed the ECR project at a cost of Rs. 60 Crore from its equity capital and by way of loan for the 113.20 kms stretch ahead of schedule on 07-12-2001 and tolling operations commenced on 24-03-2002. The project has been developed with the following salient features.

1. Widening the existing road to a two lane paved / hard shoulder configuration.
2. Realignment of the dangerous curves.
3. Extensive road marking with thermoplastic reflective paints, delineators and signage boards.



4. The value added services of 24 hrs trauma care and ambulance services on call, help line facilities at every 3 km and round the clock patrolling and security services.

Besides, the regular maintenance work is also being carried out by TNRDC.

The Proposal sent by TNRDC for the revision of Toll Rates is under the consideration of Government.

## **12.2 Projects completed by TNRDC as Managing Associates**

### **Railway Over Bridge (ROB) on NH 67 at Lalapet, Karur District**

The National Highway (NH) 67 connecting Tuticorin with Coimbatore carries significant traffic, mainly freight traffic from Tuticorin Port to western Tamil Nadu and Kerala. To overcome the

bottleneck of 25 gate closures per day in the Lalapet Level Crossing in Karur District, the Department of Road Transport and Highways, Government of India has proposed to construct a Railway Over Bridge on the level crossing at Lalapet and had appointed TNRDC as its Managing Associate for the Project. The Project costing about Rs.40 Crore has been completed and was opened for public use on January 9, 2009.

### **12.3 Integrated Infrastructure Improvement of Guindy Industrial Estate**

The Thiru Vi. Ka. Industrial Estate, was the first Industrial Estate to be set up in the country, and is situated in Guindy within the Chennai Metropolitan Area spread over an area of 404 acres and housing about 700 units. The Estate is

being managed by Tamil Nadu Small Industries Development Corporation (SIDCO). With the aim of restoring this premium Estate to its erstwhile glory, SIDCO has engaged TNRDC as its Managing Associate for implementing a comprehensive Integrated Infrastructure Development Programme at a cost of Rs. 27.95 Crore. The scope of work assigned to TNRDC was completed in 2012.

#### **12.4 Project so far completed By ITEL.**

##### **IT Express Way and Corridor Phase I**

The IT Corridor Phase -1 was developed as a six lane road from Madhya Kailash to Siruseri for a length of 20.10 Km. The link road connecting Sholinaganallur and East Coast road for a length of 2.15 Km was widened to a four

lane. This road is being maintained as a toll road by M/S IT Expressway Ltd and road tolling Operations commenced on 15-12-2008. The project comprises the following salient features.

1. Widening the existing road to a dual three lane carriageway;
2. Service road and Non-Motorized Vehicle (NMV) lanes along the carriageway.
3. Provision for pedestrian footpaths and planter strips.
4. Landscaped medians
5. Construction of service trenches /ducts for conveying utility lines including electrical, telephony and optic fiber cables /wires to avoid digging in future.

6. The water and sewer lines constructed under the foot paths.
7. Widening of the bridge at Karapakkam.
8. Implementation of a comprehensive Rehabilitation and Resettlement plan for rehabilitating project affected families/structures.
9. For safe road crossing, 15 Foot over Bridges are being provided at various locations.
10. Extensive road marking with thermoplastic reflective paints, delineators and signage boards.
11. The value added services of 24 hrs trauma care and ambulance services on call basis and round the clock patrolling and security services.

12. Automatic Traffic Signals at 16 locations are being maintained by ITEL.

Besides this, the regular maintenance work is also being carried out by ITEL.

The Government have approved the revision of Toll rates up to 31-01-2014.

## **12.5 Projects under implementation by TNRDC.**

### **12.5.1 Chennai Outer Ring Road – Phase I**

The Government of Tamil Nadu has decided to provide a major connectivity Corridor on the western side to ease the congestion for free and quick flow of traffic. Administrative sanctions have been accorded for the development of Chennai Outer Ring Road Project Phase-1 as a

Green Field Project with the formation of dual three lanes with Service Roads to a width of 25m separated with proposed 22m wide Public Transportation Corridor (PTC) and a 50m Corridor for future development for a length of 29.65 Km from Vandalur in NH-45 to Nemilichery in NH-205 Via Nazarathpet in NH-4 at a cost of Rs1081.40 Crore on 08-10-2009.

Tamil Nadu Road Development Company Ltd has been appointed as the "Managing Associate" for this project under Design, Build, Finance, Operate and Transfer (DBFOT) model with a concession period of 20 years.

M/s. GMR Infrastructure Ltd, M/s GMR Energy Ltd and M/s NAPC Ltd, Consortium was awarded the work on Semi

Annual Annuity basis and the work commenced on 03-06-2010.

The Government have also sanctioned a sum of Rs 300 Crore as a Project Support fund payable to the concessionaire during the construction period, based on the physical progress.

At present 83% of the works have been completed and the expected date of completion of the project is 31-12-2013.

#### **12.5.2 Ennore Manali Road Improvement Project (EMRIP)/ Chennai Ennore Port Road Connectivity Project**

The Project envisages the improvement of about 30 km road network in North Chennai with the objective of establishing seamless and efficient road connectivity from Chennai and Ennore Ports to NH network. The roads that are being



improved include the Ennore Expressway, Manali Oil Refinery Road, Northern part of Inner Ring Road and Thiruvottiyur-Ponneri-Panchetti Road.

Recognizing the pioneering role played by TNRDC in conceptualizing and developing the Project, NHAI, the project sponsor, has engaged TNRDC as its Managing Associate. Subsequently, due to modification of its scope, TNRDC has been made designated Supervision Consultant.

A Special Purpose Vehicle (SPV) named Chennai-Ennore Port Road Company Ltd (CEPRCL) was incorporated for the implementation of this project with equity & debt participation of NHAI, Chennai Port Trust, Ennore Port Ltd and Government of Tamil Nadu as stakeholders at a total project cost of Rs.600 Crore.

Under the rehabilitation and resettlement for the tenements project affected families in Ennore Expressway, 1824 tenements have been constructed at Ernavoor. So far, 1791 families have been shifted to the new tenements.

The overall completion of the project is expected by December 2013.

## **12.6 Significant Achievements**

### **12.6.1 TNRDC**

Inspite of the reduction in the consultancy and space selling revenue, the Company earned a Profit after Tax of Rs.3.66 Crore as on 31.03.2012. The Profit before Tax was Rs.4.94 Crore as compared to Rs.2.14 Crore of the previous year.

### **12.6.2 ITEL**

The company earned a Profit before tax of Rs.2.27 Crore as on 31.03.2012. The

Profitability of the company has increased mainly due to the reduction in the Finance Cost on installments paid against Term Loan from Banks and Financial Institutions and also because of a considerable increase (16%) in the Toll Revenue.

## **12.7 TNRDC Road Map for the year 2013-2014**

The following major projects are in the road map for TNRDC for the year 2013-2014.

### **12.7.1 Improvements to North Chennai Thermal Power Station Road and Ennore Port Road**

M/s. Toshiba-JSW (JV) Turbine and Generator Pvt. Ltd., has set up a manufacturing plant in Andarkuppam Km.6/150 of Thiruvottiyur – Ponneri - Panchetti Road. The heavy Special Transport Vehicle (525T) will have to travel

7.35 km on the Thiruvottiyur-Ponneri-Panchetti (TPP) road, 4.8 km on North Chennai Thermal Power Station (NCTPS) road and 2.4 km on the Ennore Port road to reach Ennore Port. Among these three roads, improvements on the Thiruvottiyur-Ponneri-Panchetti Road which is part of the Ennore Manali Road Improvement Project (EMRIP) is being executed by the SPV formed by NHAI, GoTN Chennai Port Trust and Ennore Port Ltd.

For the other two roads (i.e.)

- (i) North Chennai Thermal Power Station Road Km 0/0 – 4/8 and
- (ii) Ennore Port Road km 0/0 – 2/4.

The Government have sanctioned Rs.84 Crore for improvement of the above roads including cost of bridges, Railway Over Bridge diversion road, shifting of

utilities and land acquisition charges etc., in G O Ms No.81 dated 04.04.2012. Out of this 75% of the cost will be borne by the Government and 25% shall be met from ASIDE funds. The TNRDC will be the Managing Associate for this project.

The Government in their G.O.(Ms) No.29, Highways & Minor Ports (HV2) Department dated 12.03.2013 have directed the Tamil Nadu Generation & Distribution Corporation Ltd (TANGEDCO) to handover the Road Portion of 4.8 Km in North Chennai Thermal Power Station Road to Highways Department on a long term lease basis. The enter upon permission for improving the Ennore Port road of 2.4 km to Highways Department is being processed by the Ennore Port.

Based on the DPR prepared by the consultants the tenders have been called for improvements to NCTPS Road and Ennore Port Road including construction of the Ennore Creek Bridge and the Buckingham Canal Bridge. The technical and financial bids were opened on 04.03.2013 and 01.04.2013 respectively and are under scrutiny. On approval of the tender, works will commence.

### **12.7.2 Northern Port Access Road**

The proposed Northern Port Access Road is an important link to the fast growing Ennore Port which handles major cargo. The proposed new road will connect the Northern Gate of Ennore Port and the Thatchur on NH-5 with an additional spur road for connecting to the Thiruvottiyur Ponneri Pancheti (TPP) Road. This will also

cater to the needs of the recently developed L & T Ship Yard.

The total length of this road connecting Ennore Port to Thatchur will be about 21.15 Km and length of the Thiruvottiyur Ponneri Pancheti (TPP) link Road will be 4.35 Km.

The Detailed Project Report for this project was originally done by the Consultants for the NHAI and TNRDC has requested to update the Feasibility study and fixing the alignment with new Topographic Survey.

The proposal for the Consultant's fees for the updation of Feasibility study is under the active consideration of the Government. On approval, the Detailed Project Report will be prepared and work taken up as a Build, Operate & Transfer (BOT)

project based on the recommendations made in the Detailed Project Report.

### **12.7.3 Widening of the East Coast Road from Akkarai to Mamallapuram and construction of additional bridge across Palar near Vayalur in East Coast Road.**

#### **(i) Widening of the East Coast Road**

The East Coast Road from Akkarai to Puducherry state border has been improved in 2001 to a two lane carriage way with paved shoulders and is being maintained by TNRDC as a Toll Road. Based on the phenomenal increase in the traffic over the past few years and the absence of centre median and insufficient carriageway to cater the growing traffic have necessitated the widening of this road to four lane with divided carriageway from Akkarai to



Mamallapuram as phase I including curve and junction improvements between Mamallapuram to Puducherry border wherever necessary.

Based on the DPR prepared by the consultants engaged by TNRDC, proposals have been sent to Government for widening of ECR to four lane with divided carriageway for administrative sanction of Rs.286.76 Crore. The Government has also announced in the Budget that the widening of this road to four lane will commence in 2013-2014.

**(ii) Construction of a Bridge across Palar**

The Government have sanctioned Rs.134 Crore in G.O Ms. No.140, Highways and Minor Ports (HV2) Department, dated 14.12.2011 for reconstruction of the

existing Palar Bridge and construction of an additional Two Lane Bridge near Vayalur on the East Coast Road (km 76/000)

Based on the above, an estimate for Rs.82.24 Crore has been prepared by the consultants for the construction of an additional new Four Lane Bridge on the upstream side. The TNRDC has published notice inviting Tenders on 30.03.2013 and this work will be commenced during this year.

#### **12.7.4 Chennai Outer Ring Road - Phase II**

The Government in G.O. (Ms) No.10, Highways and Minor Ports (HN2) Department, dated 23.01.2012 have sanctioned the Chennai Outer Ring project Phase-II, a major six lane road connectivity project to a length of 30.50 Km from Nemillicheri in NH-205 to Minjur in

Thiruvottiyur Ponneri Pancheti (TPP) Road via Padiyanallur in NH-5 at a cost of Rs.1075 Crore under the Design, Build, Finance, Operate and Transfer (DBFOT) with Annuity payment on the same model as Phase-I. TNRDC has been appointed as “Managing Associate” for Chennai Outer Ring Road Project Phase-II.

Evaluations of bids have been completed and proposals are in the process of being placed before the Government for approval.



Flyover near Vandalur Tank on Chennai Outer Ring Road.





Ongoing interchange work at Nazarathpet (NH 4)  
on Chennai Outer Ring Road.





Ongoing interchange work at Nemilicherry (NH 205)  
on Chennai Outer Ring Road.







Ongoing road work at Vellangal Chavadi on Tiruvottiyur – Ponneri – Panchetty Road under EMRIP.



### **13. Tamil Nadu Maritime Board**

The State of Tamil Nadu has a coast line of about 1076 Kms. Within this 1076 Kms. long coast line, there are three major ports, namely, Ennore, Chennai and Tuticorin notified under the Major Port Trust Act, 1963 and 23 Non-Major (Minor) Ports notified under the Indian Ports Act, 1908. The major ports come under the control of Government of India and the non-major ports come under the control of the State Government.

### 13.1 Minor Ports in Tamil Nadu

The following are the minor ports either active or under various stages of development in Tamil Nadu:

Government Ports	Captive ports	Ports under process yet to be notified
1) Cuddalore 2) Nagapattinam 3) Pamban 4) Rameswaram 5) Valinokkam 6) Kanyakumari 7) Colachel	1) Kattupalli 2) Ennore 3) Mugaiyur 4) Thiruchopuram 5) Silambimangalam Shipyard 6) PY-03 Oil Field 7) Parangipettai 8) Kaveri 9) Vanagiri 10) Thirukkadaiyur 11) Thirukkuvalai 12) Punnakkayal 13) Udangudi 14) Manappad 15) Koodankulam 16) Chettinad Tharangampadi	1) Cheyyur (Panaiyur) 2) Marakkanam 3) Combined port facility at Sirkazhi Taluk

All the minor ports in Tamil Nadu except Kattupalli port are anchorage ports without berthing facilities and hence cargoes are transhipped from the vessels at mid-stream to the shore and vice-versa through barges or submarine pipelines.

## **13.2 Activities of Minor Ports**

### **13.2.1 Government Ports:**

Out of the seven Government Ports, M/s. Chemplast Sanmar Ltd., imports Vinyl Chloride Monomer (VCM) for their P.V.C. factory established at Cuddalore Sipcot Complex through their Captive Marine Terminal facility located within the port limits of Cuddalore Minor port limits. Similarly, M/s. Chennai Petroleum Corporation Ltd, (CPCL) exports Diesel and Naphtha from their Narimanam (Nagapattinam District) refinery through

their captive open sea jetty located within the port limits of Nagapattinam port. Import of wooden logs and edible oil is done occasionally at Cuddalore and Nagapattinam ports respectively. Small ships are piloted through Pamban Channel. Kanniyakumari and Rameswaram ports are used for passenger ferry service. There is no activity in other ports.

### **13.2.2 Captive Ports:**

The Captive Ports are operated by private companies for their own use. The development of entire infrastructure facilities in these captive ports is the responsibility of the companies concerned.

Of the sixteen Captive Ports, six ports, viz., Kattupalli Port (Thiruvallur), Ennore Minor Port (Thiruvallur), PY-03 Oil Field (Cuddalore), Thiruchopuram Port

(Cuddalore), Thirukkadaiyur Port (Nagapattinam) and Koodankulam Port (Thirunelveli) have been permitted to operate the port either for import/export of the construction equipments of the port based industry or the cargo from the port based industry.

Out of the above six ports, at Ennore Minor Port and Thirukkadaiyur 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. It is proposed to handle Containers, General and Project cargo and Automobiles through Kattupalli port. Presently, there are no activities in the ports of PY-03 Oil Field, Thiruchopuram and Koodankulam. The remaining ten ports are under various



stages of obtaining the requisite statutory approvals/financial closure to commence the construction of the port based industry/port.

### **13.3 Commodities handled in Minor Ports**

#### **13.3.1 Government Ports:**

<b>Sl. No</b>	<b>Port</b>	<b>Shipped</b>	<b>Landed</b>
1.	Cuddalore	----	Vinyl Chloride Monomer
2.	Nagapattinam	Diesel and Naphtha	Edible Oil and General cargo

#### **13.3.2 Captive Ports:**

<b>Sl. No</b>	<b>Port</b>	<b>Shipped</b>	<b>Landed</b>
1.	Kattupalli Port	Containers	-----
2.	Ennore Minor Port	----	Liquid Ammonia
3.	Thirukkadaiyur	----	Naphtha and Natural Gas.

### **13.4 Tamil Nadu Maritime Board:**

The Tamil Nadu Maritime Board was formed under the Tamil Nadu Maritime Board Act of 1995 (Act 4 of 1996), whereby the erstwhile Tamil Nadu Port Department was converted into a Maritime Board for the purpose of Administration, Management and Control of the Non-Major Ports in the State of Tamil Nadu and for matters connected therewith, with the following objectives:

- To facilitate / encourage establishment of Port based industries such as Thermal Power Plants, Refineries, Fertilizer plants etc., by providing exclusive port facilities to handle the cargo required for such industries.
- To provide port connectivity to the industries in the Central / Western Districts in the State of Tamil Nadu.

- To decongest the Major ports in the State of Tamil Nadu.
- To decongest Highways and Railways by providing facilities for coastal shipping and
- To promote the maritime training activities to the level of international standards.

### **13.5 Minor Port Development Policy**

Considering the importance of the industrialization for the economic development of the State, Tamil Nadu Maritime Board encourages setting up of Captive Ports, Jetties and Moorings for the port based Oil Industries, Thermal Power Projects and also multiuser ports on "BOOT" basis.

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

Ports in Tamil Nadu and to optimise on the investments and the Port Infrastructure.

### **13.6 The main highlights of the Port Policy**

The vision of this Board is to promote cordial relationship between the Ports and 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.

#### **Objectives of the Port Policy :**

- 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 and construction of floating crafts.

## **13.7 Policy Guidelines**

### **13.7.1 Private Participation:**

With a view to create multi user facilities capable of handling all types of cargo like bulk, break bulk, containers, liquid bulk petroleum products, chemicals, the Government of Tamil Nadu have decided to develop all the Minor and intermediate ports in the state through Public Private Participation.

### **13.7.2 Captive jetties:**

In order to satisfy the requirements of industries for allocation of sites for construction of captive jetties for port based industries and create facilities, Government of Tamil Nadu have decided to allow private initiative in construction of Ports / Jetties. Private companies making substantial investment in coastal areas requiring port based facilities will be allotted sites for construction of jetties both captive and commercial.

### **13.7.3 Approach:**

The private participation in construction /development of ports / jetties will be encouraged through a well set out transparent procedure.

#### **13.7.4 Operational Strategy:**

- 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.
- Will recover a reasonable amount on the cargo handled.

### **13.8 Initiatives of the Board in Development of Ports :**

#### **13.8.1 Kattupalli Port:**

The Government of Tamil Nadu had permitted M/s Tamil Nadu Industrial Development Corporation Ltd to form a joint venture with M/s. L&T, Mumbai, to implement a Ship yard-cum-Minor Port complex at Kattupalli with certain

conditions. One amongst the various conditions is that the joint venture company is permitted to operate the minor port on captive basis and with a request to Tamil Nadu Maritime Board to consider permitting the joint venture company to handle other commercial cargoes to facilitate optimum usage of the port facilities in accordance with the Minor Port Development Policy of Government of Tamil Nadu.

Based on the above, the joint venture company, namely, M/s L&T Shipbuilding Ltd was permitted to construct the Shipyard-cum-Minor Port complex at Kattupalli. The company, upon completion of construction of the Shipyard-cum-Minor Port complex, had approached this Board to commence the captive and commercial



operations of the port. This was approved by the Board and this port was inaugurated by the Hon'ble Chief Minister on 30.01.2013.

As part of the port operations, the company has proposed to handle Containers, General and Project Cargo and Automobiles in addition to the captive activities at the Shipyard-cum-Minor Port complex.

### **13.8.2 Development of a Green Field Port at Nagapattinam:**

The existing Nagapattinam Minor Port, located at the mouth of the Kaduvaiyaru river, is a lighterage port handling General cargo. Historically, this port was serving the Passenger trade between Nagapattinam and Singapore/Malaysia. The port was also used

for import of wheat and fertilizers. Consequent to the passenger ship meeting with the fire accident and reduction of import of wheat and fertilizers due to the change in Import Policy, the activities at the port came to a standstill. With the Nagapattinam town situated around the Nagapattinam Minor Port, expansion of the existing port became difficult.

As such, it was proposed to prepare a Techno Economic Feasibility Report by engaging I.I.T., Madras to develop an All Weather, Deep Water, Direct Berthing, Greenfield Port, adjacent to the existing Nagapattinam Minor Port. The I.I.T., Madras, in their report, has recommended developing this port as an All Weather, Deep Water, Direct Berthing Port at an estimate of Rs.380 Crore.

The primary and secondary hinterland of the proposed port at Nagapattinam comprises the districts of Nagapattinam, Perambalur, Villupuram, Salem, Namakkal, Karur, Thanjavur, Thiruvarur and Erode.

Accordingly, the Government of Tamil Nadu, vide G.O.Ms.No.7, Highways and Minor Ports (HF2) Department, dated 20.01.2012, have approved development of an All Weather, Deep Water, Direct Berthing, Green field Port at Nagapattinam on Public Private Participation (PPP) mode through a competitive bid process.

In order to assist this Board with the above bidding process, M/s i-maritime Consultancy Private Ltd., Mumbai, have been engaged through a bidding process. After a site visit and initial discussions with

this Board, M/s i-maritime Consultancy Ltd., have submitted documents such as notice inviting bids, bid documents containing qualification and financial criteria of the bidders and the selection procedure to be adopted in selecting the successful bidder along with a draft concession agreement for further process. Since the analysis of the content of these documents require deeper study, the Board has formed a Technical Sub Committee headed by the Joint Secretary, Finance Department, to analyze the documents and make its recommendations to the Board. Accordingly, the Committee met on 22.01.2013 and have submitted its recommendations to the Board. Based on the recommendations of the Board, further process would be initiated on the bidding.

### **13.8.3 Development of a port at Cuddalore:**

Cuddalore port was active in the years of eighties and handled multifarious cargo to the tune of 2-3 lakh Metric tones per annum. The ship traffic at Cuddalore Minor Port gradually declined and now a days the port is without any cargo activity. As such, it was decided by this Board, to offer the existing Cuddalore Minor Port on the basis of Develop, Operate, Maintain, Share and Transfer (DOMST) through Public Private Participation mode. For this purpose, I.I.T., Madras was requested to prepare a Techno Economic Feasibility Report. As per the Report, the proposed investment is about Rs.150 Crore over a six year period with the revenue to the Board based on the Minimum Guaranteed Annual Throughput (MGT), with the duration of

concession being 30 years from the Date of Commissioning (DoC).

Based on the above TEF, bids were invited with the last date for submission as 04.06.2010. Two firms submitted the bids, A Consortium, formed by M/s. Marg Ltd and M/s. Chemplast Samar Ltd, Chennai (known as M/s. Marg Ltd), had offered the highest bid. However, the Board, while considering the offer of M/s Marg Ltd, decided to proceed with the Concession Agreement after getting the concession agreement vetted by the Government. Subsequently, the Board, in its 75<sup>th</sup> meeting held on 06.12.2012, decided to cancel the above tender, since the bid submitted by M/s Marg Ltd is nearly 2½ years old and that the market and industrial scenario had both undergone

significant changes in this duration. Accordingly, it is now proposed to recast the earlier proposal in line with the change in market and industrial scenario and invite fresh bids.

The Government of India has approved the proposal of the Tamil Nadu Government for setting up a Petroleum, Chemical and Petrochemical Investment Region (PCPIR) in Cuddalore and Nagapattinam districts. Many imported coal based Thermal Power Plants are planned/under implementation in Cuddalore District.

The primary and secondary hinterland of the proposed Greenfield port at Cuddalore comprises of the districts of Cuddalore, Perambalur, Villupuram, Salem, Namakkal, Karur, Thanjavur, Thiruvarur

and Erode. The Cuddalore district has a sizeable industrial composition with over 30 large scale industries. It also has a number of Small Scale Units and Cottage industries engaged in the development of small, medium and large scale Industries in Tamil Nadu. SIPCOT has setup a 1,266 acres of Industrial complex in phases. Apart from the SIPCOT complex, SIDCO also houses an industrial complex at Semmandalam, which caters to a number of Small Scale Units.

In this context, it becomes critical to develop sizeable world-class facilities in the Cuddalore region through a combination of upgradation of existing captive brown field facilities as well as creation of new multi-user Greenfield ports in this region.



### **13.9 Development of Captive Ports :**

As earlier stated in Para 13.5, the development of entire infrastructure in the captive ports, is the responsibility of the private companies for their own use. Out of the sixteen captive ports, three captive ports, viz., Kattupalli port, Ennore Minor Port and Thirukkadaiyur port are functional and are handling import/export cargo.

In the Captive ports of PY-03 Oil field, Thiruchopuram and Koodankulam, there is no activity in the port, mostly because the need of the port for the port based industry has decreased for various reasons over a period of time.

However, following is the status of the remaining ten ports.

### **13.9.1 Captive ports awaiting clearance from the Ministry of Environment and Forest, New Delhi:**

The Port of Mugaiyur, proposed to be developed by M/s Marg Swarnaboomi Port Pvt.Ltd in Kanchipuram District for the Ship repair facility, the Port of Kaveri, proposed to be developed by M/s PEL Power Projects Ltd in Nagapattinam District for handling coal required for their power plant, the Port of Vanagiri proposed to be developed by M/s NSL Power Ltd in Nagapattinam District for handling coal required for their power plant, the port of Thirukkuvalai, proposed to be developed by M/s Tridem Port and Power Projects Ltd, in Nagapattinam District for handling coal required for their power project, the port at Udangudi in Tuticorin District for a power plant at Udangudi, proposed to be

developed by M/s Udangudi Power Corporation Ltd, and the Chettinad Tharangambadi port, near Tharangambadi in Nagapattinam District, for the power plant to be developed by Chettinad group of companies are awaiting environment clearance from the Ministry of Environment and Forest (MoEF), New Delhi for various reasons and therefore, the companies have not achieved financial closure and as such there is no activity on ground. The port of Manappad proposed by M/s Indian Gas Ltd for handling LNG for the power plant is also awaiting for MoEF clearance, New Delhi. Since there is good potential for a port in this region, it is proposed to reconsider this approval and proceed further.

### **13.9.2 Captive Ports where approval has been withdrawn :**

The port of Punnakkayal was notified for the captive use of M/s Dharangadara Chemical Works, Sahupuram in Tuticorin District. The company has withdrawn their proposal and as such there is no activity on ground. The Silambimangalam Shipyard Port proposed by M/s Goodearth Shipbuilding Private Ltd., in Cuddalore District as a Shipbuilding yard has changed the Shareholding pattern of the company without the prior approval of the Board and as such, the permission granted to the company, viz., M/s Goodearth Shipbuilding Pvt.Ltd., has been withdrawn and therefore there is no activity on ground.

### **13.9.3 Captive Port, where activities are in progress :**

M/s IL&FS Tamil Nadu Power company Ltd., have proposed to establish a 4000 MW Coal based Thermal Power Plant at Parangipettai for which, a Captive port at Parangipettai has been notified. The company has obtained most of the statutory approvals and financial closure and will commence construction activities of the Captive Port shortly.

### **13.10 Captive Ports – Proposed**

#### **13.10.1 Port at Panaiyur in Kanchipuram District:**

The Government of India, in Central Electricity Authority, have proposed to establish a 4000 MW Ultra Mega Power plant project at Cheyyur in Kanchipuram District. To enable to receive coal for this power plant, a Captive port has been

proposed at Panaiyur in Kanchipuram District near the power plant. Proposals to notify the power plant is under process.

### **13.10.2 Port at Marakkanam in Villupuram District:**

M/s National Thermal Power Corporation had proposed to set up a 4000 MW Super Thermal Power Project at Marakkanam in Villupuram District. An In-principle approval for establishing the port to handle coal for this power plant has been granted and further process from the company is awaited.

### **13.10.3 A Combined Port Facility at Sirkazhi Taluk in Nagapattinam District:**

M/s. Empee Power and Infrastructure Private Ltd and M/s. Sindya Power Generating Company Private Ltd have proposed to set up separate thermal

power plants in Sirkazhi Taluk in Nagapattinam District. Since their power plants are closely located, they were requested to establish a combined port. Accordingly, they have formed an SPV company namely M/s. Sirkazhi Port Private Ltd to develop the combined captive port near Sirkazhi Taluk in Nagapattinam District. M/s. Sindya Power Generating Company Private Ltd has submitted a Technical Feasibility Report and requested for declaration of port limits, which is under consideration of Tamil Nadu Maritime Board.

### **13.11 Other Initiatives of the Board :**

#### **13.11.1 Construction of New Administrative Office Building:**

The Head Office of Tamil Nadu Maritime Board is now functioning from a

rental building at T.Nagar for more than 10 years. The Government, vide G.O.Ms.No.52, Highways and Minor Ports (HF 2) Department, dated 30.03.2012, has approved the revised administrative sanction for construction of a New Office building for Tamil Nadu Maritime Board in the 8 grounds and 554 Sq.Ft. of land owned by Tamil Nadu Maritime Board at Greenways Road, Adyar, at a cost of Rs.14.90 Crore.

The building is designed as Stilt plus four floors with plinth area of 700 Sq.M.(7500 Sq.ft) per floor. This Board has decided to take up the third and fourth floor for occupation for its own purpose and decided to rent out the first and second floors to Tamil Nadu Road Sector Project



and Tamil Nadu Road Development Company respectively.

The building is provided with the latest amenities, viz., U.G.Sump, Water treatment and R.O. plant, Sewage Treatment plant, A.C, 24x7 D.G. back up, Structural Glazing and now the finishing and internal partition works are in progress, which is expected to be completed by the end of March, 2013.

### **13.11.2 Payment of Share of Revenue of the Board to Government:**

The Government of Tamil Nadu brought out a new Minor Ports Development Policy defining the licensing process for Captive and Commercial Ports and also enabling the Captive ports to handle other Commercial cargo to facilitate optimum usage of port facilities.

In the year 2011-2012, about 12.10 lakh M.Ts. of cargo was handled

through the 22 Minor Ports and the Board earned Rs.8.67 Crore towards the Port and Cargo dues. The total income of the Board including the other items of income has increased to Rs.26.35 Crore.

From the revenue of the Board, an amount of Rs.5,09,82,313/-, being the Share of Revenue to the Government, was handed over to the Hon'ble Chief Minister by the Minister for Highways and Minor Ports and Chairman, on behalf of the Tamil Nadu Maritime Board on 22.11.2012.

### **13.11.3 Establishing a Maritime College at Thoothukudi:**

In the engineering colleges around Chennai, Maritime courses are taught under a Department and there is no dedicated Maritime College. As such, the Board had proposed to establish a dedicated Maritime College at Thoothukudi. The Government vide G.O.Ms.No.6, Highways and Minor Ports (HF 2) Department, dated 19.01.2012

had approved the above proposal and instructed that it be done on Public Private Participation (PPP) mode. For the purpose of establishing this College, 6 hectares of land at Tharuvaikulam in Thoothukudi District was identified. The District Collector, Thoothukudi has also granted enter upon permission for this land. To assist Tamil Nadu Maritime Board in the bid process, M/s ITCOT Consultancy and services were engaged through a bidding process and they have submitted the bid document containing Technical and Financial Eligibility Criteria of the bidders, financial selection criteria and model concession Agreement that would be entered into with the successful bidder. Since the analysis of the content of these documents require deeper study , the Board has formed a Technical Sub Committee headed by the Joint secretary, Finance Department, to analyze the

documents and make its recommendations to the Board. The Committee had met twice and has submitted its recommendations to the Board. Based on the recommendations of the Board, further process would be initiated on the bidding.

### **13.12 Vision of Maritime Board:**

The Indian Port Sector has handled more than 1300 Million Metric tonnes of cargo in the year 2011-2012. This is expected to be more than 1500 MMT in the year 2012-2013. The contribution of non-major ports in this significant achievement is nearly 40%. This was possible due to the development of non-major ports through private participation.

The Government of Tamil Nadu, in its "VISION 2023" document, has targeted attracting private investment to the tune of about Rs.15,000 Crore in the port sector alone.

Keeping the above target in mind, this Board aims to attract about Rs.5000 Crore investment in the next five years and another Rs.10,000 Crore in the subsequent five years.

This will increase the cargo throughput through the non-major ports to about 50 Million Metric Tonnes in the first five years and to take it to about 150 MMT in the subsequent five years.

To achieve this target, the Tamil Nadu Maritime Board will invite proposals and promote non-major ports through private investment or on Public Private Participation (PPP) mode.



Kattupalli Port inaugurated by the Hon'ble Chief Minister on 30.01.2013.





Newly constructed office building of the Tamil Nadu Maritime Board  
at Greenways Road, Adyar.





## **14. Poompuhar Shipping Corporation Ltd**

### **14.1 History**

The Government of Tamil Nadu formed a Shipping Corporation on 11.04.1974, under the Companies Act, 1956, in the name of Poompuhar Shipping Corporation Ltd., with the main objective of transporting the entire coal, required by Tamil Nadu Generation and Distribution Corporation Ltd., (TANGEDCO) erstwhile Tamil Nadu Electricity Board for generation of electricity. This is the only one, State owned Shipping Corporation in the Country.

### **14.2 Administrative Matrix:**

The Corporation is headed by the Chairman and Managing Director and the affairs of the Corporation are managed by the Board of Directors consisting of Bureaucrats nominated by the Government

of Tamil Nadu. The day to day activities are executed by the various Departments namely, Technical, Operation, Finance and Personnel & Administration headed by qualified persons in the respective field. The Human Resources of the Corporation is 128 personnel ashore apart from floating staff of 140 personnel for operation of three own vessels.

### **14.3 Core Activities:**

The core activities of the Corporation are transportation of thermal coal along the east coast of India and transportation of passengers from the shore at Kanniyakumari to Vivekananda Rock Memorial and Ayyan Thiruvalluvar Statue.

## **14.4 Transportation of Coal:**

### **14.4.1 Transportation of Coal for TANGEDCO:**

The entire domestic coal allotted by Indian Coal Companies to TANGEDCO is transported by the Corporation utilizing its three specially designed shallow draft 45000 tonnage vessels namely M.V.Tamil Anna, M.V.Tamil Periyar and M.V.Tamil Kamaraj from the load ports of Haldia, Paradip and Visakhapatnam to discharge ports at Ennore and VOC Port, Thoothukudi. In addition, depending on the requirement, seven to eight vessels are also chartered from the private shipping companies for transportation of coal.

### **14.4.2 Transportation of coal for NTECL:**

The Corporation has entered into a Memorandum of Understanding on

12.03.2012 with M/s. NTPC Tamil Nadu Energy Company Ltd., (NTECL), a joint venture company of TANGEDCO and NTPC, for transportation of entire domestic coal from the load ports of Paradip and Gangavaram to Ennore for their upcoming 3 x 500 MW Thermal Power Stations at North Chennai. The Corporation has already started its operation by engaging one chartered vessel for NTECL.

#### **14.4.3 Discharge Operation at Thoothukudi:**

Apart from providing transportation of coal, the Corporation also undertakes the stevedoring function of discharging the coal from the hatches of the ships to the hoppers installed at the coal jetty-1 at VOC Port, Thoothukudi using the ship's cranes, by engaging its own qualified manpower.

#### **14.5 Workshop at Thoothukudi:**

Minor repairs and maintenance at the vessels and maintenance of grabs of own vessels are being carried out by the Workshop at Thoothukudi.

#### **14.6 Kanniyakumari Ferry Service**

The Corporation is also undertaking the activity of ferrying passengers by ferries from the shore of Kanniyakumari to the Vivekananda Rock Memorial and Ayyan Thiruvalluvar Statue and back to shore. For transporting the passengers, three ferries namely M.L.Bhagirathi, M.L.Guhan and M.L.Pothigai with a seating capacity of 125,150 and 150 passengers respectively are being used. A new ferry with a seating capacity of 150 passengers has been ordered at a cost of Rs.1.08 Crore, as a replacement of 35 years old ferry

M.L.Bhagirathi. The new ferry will be inducted into operation shortly.

#### **14.7 Pricing Policy/Modus Operandi:**

As the Corporation was formed with a main objective of providing the service of transportation of coal to TANGECO, the Corporation operates its own vessels on "Cost plus Return on Equity of 12%" and chartered vessels on "No Profit and No Loss" basis.

The transportation of coal for NTECL is undertaken with service charges of 5% on Charter hire charges of the vessels chartered for their operations.

#### **14.8 Performance**

##### **14.8.1 Coal Transportation:**

The Corporation transports almost the entire coal received at the load ports

during the financial years through its own and chartered vessels.

The physical and overall financial performances of the Corporation during the last three financial years are as follows:

Year	Quantity of coal received at load ports	Quantity of coal moved	Turn Over	Profit
	(Lakh MT)		(Rs.in Crore)	
2010-11	125.74	124.49	517.02	2.04
2011-12	126.04	126.60	492.63	1.51
2012-13	124.34	124.92	650.00	3.00

Note: 2012-2013 figures are estimates.

### **14.8.2 Passenger Transportation:**

As a result of revision of tariff as approved by the Government of Tamil Nadu with effect from 10.07.2012, the ferry service is expected to earn profit during 2012-2013, since 2009-2010.



The physical and financial performance of Kanniyakumari Ferry Service is as follows:

<b>Year</b>	<b>No.of Passenger Transported (in lakhs)</b>	<b>Fare Collection (Rs.in Lakhs)</b>	<b>Profit/Loss (Rs.in Lakhs)</b>
2010-2011	19.15	373.35	(-) 52.43
2011-2012	20.26	395.84	(-) 46.65
2012-2013	20.47	681.59	100.00

Note: 2012-2013 figures are estimates.

## **14.9 Plans for 2013-2014:**

### **14.9.1 Coal Transportation**

The Corporation plans to move the total estimated coal allotment of 180 lakh MT and 26 lakh MTs by Indian Coal Companies to TANGEDCO and NTECL respectively through its own and chartered vessels.

### **14.9.2 Passenger Transportation**

With the induction of new ferry into operation, the Corporation plans to transport more number of passengers in the days to come.

### **14.10 Roads ahead:**

As the Corporation's three own vessels have crossed 25 years of age, the Corporation is in the process of inviting tenders for appointment of consultant to study various aspects viz., Fleet expansion program, Optimum own and chartered vessels mix ratio, Economic viability of existing vessels, reviewing the working relationship with the TANGEDCO, Optimum debt equity mix in case of purchase of vessels, etc., duly considering the existing infrastructure available at the load and discharge ports and future expansion and

modernization if any, coal requirement for TANGEDCO and other Public Sector Power Generating companies' existing and proposed thermal plants, proposed coal allotment plans of Indian Coal companies to the power generating companies, existing and future prospects of shipping industries, etc.



The new ferry, M.L. Vivekananda procured for the ferry service to the Vivekananda Rock Memorial at Kanniyakumari.



## **15. Conclusion**

The Hon'ble Chief Minister's Vision for 2023 is for Tamil Nadu to become India's most prosperous and progressive State with no poverty and where its people enjoy all the basic services of a modern society and live in harmonious engagement with the environment.

It is therefore, axiomatic that Tamil Nadu would provide its residents high quality infrastructure all over the State, comparable with the best in the world. In this milieu, it is logical that a robust and vibrant Highways and Minor Ports Department would play the role of a catalyst for the broad based economic growth of the State.

It is the focused objective of this Department to live up to these expectations

and deliver on the promises made. Realizing the myriad challenges facing this sector, the department has evolved a measured, comprehensive and calibrated strategy to deal with these issues. This strategy has been multi-faceted and the basic thrust and philosophy of this approach has involved a convergence of effort, aimed at an inclusive synergy of the various departments involved.

It would be the endeavour of the Highways and Minor Ports Department to ensure the commencement of work on the World Bank funded second phase of the Tamil Nadu Road Sector Project (TNRSP), this financial year. Expeditious steps would be initiated to ensure the establishment of a new “Tamil Nadu State Highways Authority” on the lines of the NHAI. The

department would ensure that, signature projects like the Phase-I of the Outer Ring Road in Chennai, the Oragadam Industrial Corridor Project and the EMRIP (Ennore-Manali Road Improvement Project) would be completed this year. The implementations of these projects are proceeding apace and have gathered considerable momentum.

Emphasis would be laid on the flagship CRIDP (Comprehensive Road Infrastructure Development Programme) and it would be ensured that priority is accorded to backward districts. The Railway works programme and the construction of bridges and roads with NABARD (National Bank of Agriculture and Rural Development) funding, would be closely monitored and expedited.



While a considerable amount of success has been achieved in the past two years, the department is conscious of the challenges ahead. Provision of world class connectivity and upgradation of the delivery of services associated with a firm and unwavering commitment to the creation of core infrastructure remain our goals, which we shall make a continuous endeavour and under the inspiring leadership of our Hon'ble Chief Minister, strive to improve the quality of life of every citizen residing in the State.

**Edappadi K. Palaniswami**  
**Minister for Highways and Minor Ports**



**The proposed integrated Chief Engineers' Office Complex  
at Guindy.**