



**GOVERNMENT OF TAMIL NADU
HIGHWAYS AND MINOR PORTS
DEPARTMENT**

DEMAND NO. 21

PERFORMANCE BUDGET

2015-2016

PERFORMANCE OF HIGHWAYS AND MINOR PORTS DEPARTMENT DURING 2015-2016

I. HIGHWAYS DEPARTMENT

1. INTRODUCTION

Road infrastructures with good quality roads ensure faster and safer travel. An efficient road network is essential to improve economic diversification through urbanization and industrialization. It also increases productivity and efficiency which boosts economic growth. Construction of roads, Ring Roads, interlinking bridges, Grade separators, Railway Over Bridges and junction improvements form the basic frame work of road infrastructure which are done through Highways Department.

The detailed physical and financial performance of the department during 2015 - 2016 is elaborated below:-

1.1 ASSETS BEING MAINTAINED BY HIGHWAYS DEPARTMENT

The Highways Department maintains 62460 km length of government roads. The classification of roads and their lengths and the type of existing bridges and their numbers are tabulated in **Table 1 and Table 2** respectively. The surface wise details and lane wise details of the roads are tabulated in **Table 3** and **Table 4** respectively.

TABLE 1: CLASSIFICATION OF ROADS

| Classification of Road | Length (km) |
|-------------------------------|--------------------|
| National Highways (NH) | |
| Maintained by NH wing | 1985 |
| Maintained by NHAI | 3009 |
| NH Total | 4994 |
| State Highways (SH) | 12093 |
| Major District Roads (MDR) | 11617 |
| Other District Roads (ODR) | 33756 |
| Total | 62460 |

TABLE 2: TYPES OF BRIDGES AND THEIR NUMBERS

| Types of Bridges | Nos. |
|---|---------------|
| Major Bridges and Minor Bridges* | 8411 |
| Culverts | 121725 |
| Railway Over Bridges at Railway level crossing(ROB) | 128 |
| Railway Under Bridges at Railway level crossing (RUB) | 46 |
| Pedestrian Sub Way | 14 |
| Total | 130324 |

*includes bridges with Linear Waterway 6m-60 m and more than 60m

TABLE 3: SURFACE-WISE LENGTH

(length in km)

| S. No. | Category of Road | Cement Concrete (C.C) | Black Topped (B.T) | Metalled | Total |
|--------------|----------------------|-----------------------|--------------------|----------|--------------|
| 1 | National Highways | 2 | 4992 | - | 4994 |
| 2 | State Highways | 21 | 12072 | - | 12093 |
| 3 | Major District Roads | 28 | 11589 | - | 11617 |
| 4 | Other District Roads | 88 | 33668 | - | 33756 |
| Total | | 139 | 62321 | - | 62460 |

TABLE 4: LANE-WISE DETAILS OF ROADS

(length in km)

| S. No | Category of road | Single lane | Inter mediate lane | Double lane | Multi lane | Total |
|-------|---|-------------|--------------------|-------------|-------------|--------------|
| 1 | National Highways | | | | | |
| | a)National Highways wing | 12 | 26 | 1825 | 122 | 1985 |
| | b) National Highways Authority of India | - | - | 906 | 2103 | 3009 |
| | Sub-Total | 12 | 26 | 2731 | 2225 | 4994 |
| | Percentage of lane-wise width of roads | - | - | 55% | 45% | |
| 2 | State Highways | 56 | 402 | 9931 | 1704 | 12093 |
| | Percentage of lane-wise width of roads | 0.5% | 3.5% | 82% | 14% | |

| S. No | Category of road | Single lane | Inter mediate lane | Double lane | Multi lane | Total |
|--------------|--|--------------------|---------------------------|--------------------|-------------------|--------------|
| 3 | Major District Roads | 500 | 7785 | 3164 | 168 | 11617 |
| | Percentage of lane-wise width of roads | 4.5% | 67% | 27% | 1.5% | |
| 4 | Other District Roads | 29709 | 3148 | 848 | 51 | 33756 |
| | Percentage of lane-wise width of roads | 88% | 9% | 3% | 0% | |
| | Total | 30277 | 11361 | 16674 | 4148 | 62460 |
| | Percentage of lane width to the total length of roads | 48% | 18% | 27% | 7% | |

1.2 PERFORMANCE UNDER PLAN SCHEMES

1.2.1 FINANCIAL PERFORMANCE

The financial performance under the plan schemes for the year 2015-2016 and Revised Budget Estimate for the year 2016-2017 are given in **Table 5**.

TABLE 5: FINANCIAL PERFORMANCE

(Rupees in Lakhs)

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|---|---|-----------------|---------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| Construction and Maintenance | | | | |
| State Highways | | | | |
| 1 | Bridges (Part II Scheme) | 0.07 | 0.00 | 0.07 |
| 2 | Roads (Part II Scheme) | 0.06 | 132.57 | 886.58 |
| 3 | 16 major works | 0.01 | 0 | 0 |
| | Sub-Total | 0.14 | 132.57 | 886.65 |
| Major District Roads | | | | |
| 4 | Major District Roads (Part II Scheme) | 0.08 | 0.00 | 0.08 |
| 5 | 16 Major works | 0.01 | 0.00 | 0.00 |
| | Sub-Total | 0.09 | 0.00 | 0.08 |
| Other District Roads | | | | |
| 6 | Other District Roads (Part II Scheme) | 0.05 | 0.00 | 0.04 |
| 7 | 16 major works | 0.01 | 0.00 | 0.00 |
| | Sub-Total | 0.06 | 0.00 | 0.04 |
| Rehabilitation of Distressed Bridges | | | | |
| 8 | Rehabilitation of Distressed Bridges (Part II Scheme) | 0.03 | 221.26 | 0.03 |
| 9 | 16 major works | 0.01 | 0.00 | 0.00 |
| | Sub-Total | 0.04 | 221.26 | 0.03 |

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|---------|---|------------------|------------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| 10 | Other Roads (Part II Scheme) | 0.09 | 0.00 | 0.09 |
| | Comprehensive Road Infrastructure Development Programme | | | |
| 11 | CRIDP – SH | 119948.07 | 129909.78 | 119948.07 |
| 12 | CRIDP - MDR | 74734.00 | 84522.23 | 74734.22 |
| 13 | CRIDP - ODR | 60318.00 | 70521.68 | 53817.71 |
| 14 | CRIDP - SCP | 25000.00 | 7472.44 | 31500.00 |
| | Sub-Total | 280000.07 | 292426.13 | 280000.00 |
| 15 | Improvement to Chennai Radial Roads | 0.02 | 36.74 | 652.73 |
| 16 | Acquisition of lands for bypasses (JK) | | | |
| | (i) works | 0.02 | 0.00 | 0.02 |
| | (ii) lands | 20000.00 | 430.05 | 10266.24 |
| | Acquisition of land Sub- total | 20000.02 | 430.05 | 10266.26 |
| 17 | Acquisition of lands for bypasses(KC) | | | |
| | (i) works | 0.00 | 0.00 | 4729.50 |
| | (ii) lands | 0.00 | 0.00 | 7179.10 |
| | Acquisition of land Sub- total | 0.00 | 0.00 | 11908.60 |
| 18 | Improvement of vital roads in industrial areas through Tamil Nadu Road Infrastructure Development Corporation | 8409.01 | 14175.00 | 15182.00 |

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|---------|---|-----------------|-------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| 19 | Chennai Outer Ring Road (Phase-I) | 28500.00 | 43697.73 | 27136.00 |
| 20 | Chennai Outer Ring Road (Phase-II) | 10600.00 | 7347.37 | 18507.00 |
| 21 | Construction of Buildings | 656.16 | 875.92 | 315.18 |
| 22 | Upgradation of IT highway in Chennai | 0.02 | 0.00 | 0.02 |
| 23 | Formation of Roads in Tribal areas | 0.01 | 0.00 | 0.00 |
| 24 | Schemes implemented under State Infrastructure and Amenities fund-Controlled by CE(H) C&M | 0.03 | 0.00 | 0.02 |
| 25 | Special Project for attending to Road Safety | 10000.00 | 9957.60 | 10000.00 |
| 26 | Palar bridge in ECR road | 4400.00 | 14912.10 | 449.00 |
| 27 | Northern Port Access Road | 0.01 | 0.00 | 0.01 |
| 28 | Construction of CE Quarters | 14.00 | 0.00 | 0.00 |
| 29 | City Traffic Improvement works | 21300.00 | 9263.97 | 15000.00 |
| 30 | High Density Corridor | 3700.00 | 1422.00 | 367.04 |

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|------------------------------------|---|------------------|------------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| 31 | Construction of flyover at Salem junction-Yercaud Road | 0.01 | 92.79 | 5000.00 |
| 32 | Programme for plastic and litter free - Highways | 0.01 | 0.00 | 0.01 |
| | Plan – Total | 387579.78 | 394991.23 | 395670.76 |
| 33 | Tsunami – Centrally assisted | 0.01 | 746.57 | 0.01 |
| | Total | 0.01 | 746.57 | 0.01 |
| | Plan Total | 387579.79 | 395737.80 | 395670.77 |
| NABARD and Rural Roads Wing | | | | |
| 34 | Improvements to Major District Roads/ Other District Roads under NABARD loan assistance | 10000.01 | 2963.09 | 5000.01 |
| 35 | Construction / Reconstruction of Bridges in Government roads with loan assistance from NABARD | 140.22 | 199.09 | 467.26 |
| 36 | Construction of bridges in Government and Panchayat Union roads | 20000.00 | 20256.16 | 26343.30 |
| 37 | Improvements to Rural Roads with NABARD loan assistance | 0.02 | 0.00 | 117.31 |

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|---------|--|-----------------|-----------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| 38 | Improvements to Bus Route with NABARD loan assistance | 0.02 | 0.00 | 0.02 |
| 39 | Improvements to Rural roads with loan assistance from NABARD under Special Component Plan | 0.02 | 0.00 | 0.02 |
| 40 | Construction of bridges under Tsunami Emergency Assistance Project with loan assistance from ADB | 1.58 | 2.42 | 2.43 |
| 41 | By-pass works (L.A.) | 2500.00 | 99.94 | 4216.28 |
| | Plan – Total | 32641.87 | 23520.70 | 36146.63 |
| 42 | Tsunami Rehabilitation Programme | 0.01 | 0 | 0.00 |
| | Total | 32641.88 | 23520.70 | 36146.63 |
| | Project Wing | | | |
| 43 | Construction of over and under bridges in lieu of existing level crossings JJ | 23636.25 | 9359.68 | 23394.59 |
| 44 | Construction of ROB in Chennai Metro Area for Traffic Management JD | 9244.42 | 4114.55 | 3171.26 |

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|---------|--|-----------------|-------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| 45 | Construction / Reconstruction of bridges JE | 2772.36 | 4163.64 | 4315.27 |
| 46 | Construction/ Reconstruction of bridges and improvement of roads with loan assistance from NABARD JQ | 777.29 | 1118.09 | 333.58 |
| 47 | Provision for road works under TNUDP JN | 0.02 | 101.87 | 92.54 |
| 48 | Construction of Road Over Bridge/Road Under Bridge in lieu of level crossings JT | 47974.51 | 16890.74 | 51532.54 |
| 49 | Madurai Radial Roads JU | 0.01 | 0 | 0.01 |
| 50 | CRIDP - Madurai Radial Roads Phase - II JY | 0.01 | 0 | 0.01 |
| 51 | Rural Roads - Marketing centre JU | 0.01 | 0 | 0.01 |
| 52 | Roads in cyclone affected areas JV | 0.01 | 0 | 0.01 |

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|---------|--|-----------------|-----------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| 53 | Construction of Interchange at the junction of Pondy-Krishnagiri road under IS&EI (JA-Head) | 0.01 | 0 | 0.01 |
| 54 | City Traffic Improvement works - CE (Projects) UA | 0.01 | 0 | 0.01 |
| 55 | Arbitration case trestle approaches to Road Over Bridge at V.M Street near Tondiarpet Railway stations (Funds received from Contingency Fund 2014-15) JG | 0.01 | 0 | 0.01 |
| 56 | Construction of over and under bridges in lieu of existing level crossings JG | 0 | 0 | 3192.60 |
| 57 | Construction of Bridges with loan assistance from HUDCO (Land acquisition payment) - JB | 0 | 97.08 | 0.01 |
| | Total | 84404.92 | 35845.65 | 86032.46 |
| | Metro Wing | | | |
| 58 | Chennai Metropolitan Development Plan | 25000 | 10975.82 | 30660 |
| | Total | 25000 | 10975.82 | 30660 |

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|---------------------------------------|--|------------------|-----------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| National Highways | | | | |
| 59 | Revamped Central Road Fund | 12136.25 | 15817.34 | 16112.22 |
| 60 | Inter State Connectivity | 1000.00 | | 0.01 |
| 61 | Economic Importance | 1000.00 | | 0.01 |
| 62 | Bharat Nirman Scheme (Maintenance borne by State Government) | 561.24 | 561.24 | 457.42 |
| 63 | State Plan – Miscellaneous Original Works | 0.01 | 81.38 | 44.00 |
| 64 | Western ghats development programme | 0.01 | 0.00 | 0.01 |
| | Total | 14697.51 | 16459.96 | 16613.67 |
| Tamil Nadu Road Sector Project | | | | |
| 65 | TNRSP | 124497.08 | 33055.84 | 122027.50 |
| | Total | 124497.08 | 33055.84 | 122027.50 |
| Highways Research Station | | | | |
| 66 | Equipment for Laboratories | 0.00 | 0.00 | 0.00 |
| 67 | Institute of Highway Research and Management | 0.01 | 0.00 | 0.01 |

| Sl. No. | Name of Scheme | 2015-2016 | | 2016-2017 Revised Budget Estimate |
|---------|--|------------------|------------------|-----------------------------------|
| | | Budget Estimate | Expenditure | |
| 68 | Operation and Maintenance of Road Measurement and data acquisition system in respect of ODR and NH | 5.40 | 4.27 | 5.40 |
| 69 | Tamilnadu Innovative Initiatives Fund (TANII) | 283.70 | 243.75 | 28.70 |
| | Total | 289.11 | 248.02 | 34.11 |
| | Director General | | | |
| 70 | Operation and Maintenance of Advanced Data Collection Equipments in respect of SH, MDR and NHAIRoads | 2.17 | 2.31 | 2.17 |
| | Total | 2.17 | 2.31 | 2.17 |
| | Plan Total | 669112.44 | 515099.53 | 687187.30 |
| | Tsunami Rehabilitation programme | 0.02 | 746.57 | 0.02 |
| | Total | 0.02 | 746.57 | 0.02 |
| | Grand Total | 669112.46 | 515846.10 | 687187.32 |

1.2.2 PHYSICAL PERFORMANCE

The physical achievements under the plan schemes for the year 2015-2016 and targets for the year 2016-2017 are given in **Table 6.**

TABLE 6: PHYSICAL PERFORMANCE

| S. No | Name of Scheme | Achievements 2015-2016 | | Targets 2016-2017 | |
|-------------------------------------|---|---------------------------------------|--------------------|---------------------------------------|---------------------|
| | | Bridges/ Culverts/ Structures in Nos. | Roads length in km | Bridges/ Culverts/ Structures in Nos. | Roads length in km. |
| Construction and Maintenance | | | | | |
| 1 | Part II Scheme Buildings | 19 | | 20 | |
| 2 | Comprehensive Road Infrastructure Development Programme | | | | |
| | State Highways | 305 | 962.31 | 200 | 1100 |
| | Major District Roads | 149 | 819.43 | 150 | 1000 |
| | Other District Roads | 92 | 1598.11 | 100 | 1900 |
| | Other District Roads Special Component Plan (CRIDP) | 7 | 320.51 | - | 500 |
| | Sub-Total | 553 | 3700.36 | 450 | 4500 |

| S. No | Name of Scheme | Achievements 2015-2016 | | Targets 2016-2017 | |
|-------|---|---------------------------------------|--------------------|---------------------------------------|---------------------|
| | | Bridges/ Culverts/ Structures in Nos. | Roads length in km | Bridges/ Culverts/ Structures in Nos. | Roads length in km. |
| | Plan Total | | | | |
| | Roads/ Bridges | 553 | 3700.36 | 450 | 4500 |
| | Buildings | 19 | - | 20 | - |
| | Tsunami Centrally assisted - | 2 | - | 6 | - |
| | NABARD and Rural Road | | | | |
| 3 | Improvements to Major District Roads/ Other District Roads under NABARD loan assistance | --- | 15.35 | --- | 115.16 |
| 4 | Construction / Reconstruction of Bridges in Government roads with loan assistance from NABARD | --- | --- | 1 | --- |
| 5 | Construction of bridges in Government and rural roads | 83 | --- | 60 | --- |

| S. No | Name of Scheme | Achievements 2015-2016 | | Targets 2016-2017 | |
|-----------------|--|---------------------------------------|--------------------|---------------------------------------|---------------------|
| | | Bridges/ Culverts/ Structures in Nos. | Roads length in km | Bridges/ Culverts/ Structures in Nos. | Roads length in km. |
| 6 | Improvements to Rural Roads with NABARD loan assistance | -- | --- | 1 | --- |
| | Total | 83 | 15.35 | 62 | 115.16 |
| 7 | Tsunami Rehabilitation Programme | --- | --- | 2 | --- |
| 8 | Railway Works Programme | 1 | ---- | 5 | --- |
| | Total | 84 | 15.35 | 69 | 115.16 |
| PROJECTS | | | | | |
| 9 | Road over/ under bridges in lieu of existing Level Crossings -JJ | 2 | - | 5 | - |
| 10 | Construction of Over Bridges/ Under Bridges in lieu of level crossings -JT | 4 | - | 6 | - |
| 11 | Construction of river bridges –JE HUDCO | 1 | - | 1 | 7.20 |

| S. No | Name of Scheme | Achievements 2015-2016 | | Targets 2016-2017 | |
|-----------|--|---------------------------------------|--------------------|---------------------------------------|---------------------|
| | | Bridges/ Culverts/ Structures in Nos. | Roads length in km | Bridges/ Culverts/ Structures in Nos. | Roads length in km. |
| 12 | Construction of bridges in Cauvery delta districts and Improvement of Sugarcane roads with NABARD loan assistance-JQ | 1 | - | - | - |
| 13 | Construction of Road over Bridges in Chennai Metro Area for Traffic Management-JD | - | - | 1 | - |
| 14 | Comprehensive Road Infrastructure Development Programme JU | - | - | 1 | - |
| | Total | 8 | - | 14 | 7.20 |
| 15 | Chennai Metropolitan Development Plan | | | | |
| | a) ROB/RUB | - | - | 1 | - |
| | b) Grade Separator | 2 | | 4 | - |
| | c) River Bridge | 3 | - | 2 | - |
| | d) Roads / Bridges (km) | - | 3.00 | - | 3.65 |
| | Total | 5 | 3.00 | 7 | 3.65 |

| S. No | Name of Scheme | Achievements 2015-2016 | | Targets 2016-2017 | |
|--------------------------------------|-----------------------------------|---------------------------------------|--------------------|---------------------------------------|---------------------|
| | | Bridges/ Culverts/ Structures in Nos. | Roads length in km | Bridges/ Culverts/ Structures in Nos. | Roads length in km. |
| National Highways | | | | | |
| 16 | Revamped Central Road Fund Scheme | | 50.20 | | 479.30 |
| 17 | Inter State Connectivity scheme | | - | | 95.85 |
| 18 | Economic Importance Scheme | | | | |
| | Total | | 50.20 | - | 575.15 |
| TAMILNADU ROAD SECTOR PROJECT | | | | | |
| 19 | Tamil Nadu Road Sector Project-II | | | | |
| 20 | Upgradation (DPR Preparation) | | 573 | | 1506 |
| 21 | Bridges/Minor Bridges | | | | |
| | Total | | 573.00 | | 1506.00 |
| Grand Total | | | | | |
| | Road and Bridges | 650 | 3718.71 | 543 | 4626.01 |
| | Buildings | 19 | ---- | 20 | |
| | Tsunami Centrally assisted | 2 | | 6 | |

1.3 PERFORMANCE UNDER NON-PLAN SCHEMES

During 2015-16, an allocation of Rs.819.73 Crore has been made for maintenance of roads and bridges. This is inclusive of the allocation provided for salary component of the work-charged establishment.

During 2015-16, renewal of 2842 km length of roads has been completed at an expenditure of Rs.852.09 Crore.

1.3.1 FINANCIAL PERFORMANCE

The financial performance indicating the details of expenditure incurred during 2015-2016 under various heads of Non Plan and the allocation for 2016-2017 is given in Table 7.

TABLE 7: NON PLAN-FINANCIAL ALLOCATION AND EXPENDITURE

(Rs.in lakhs)

| S. No. | Name of Scheme | 2015-2016 | | 2016-2017 |
|--------|--|-----------------|-----------------|-------------------------|
| | | Budget Estimate | Expenditure | Revised Budget Estimate |
| 1 | National Highways (Urban) | 234.52 | 234.26 | 234.52 |
| 2 | Certain important Roads in the City of Chennai taken from Corporation of Chennai | 2110.64 | 2110.50 | 2110.64 |
| 3 | State Highways | 15296.00 | 15955.14 | 15984.22 |
| 4 | Major District Roads | 13567.68 | 14097.35 | 14439.01 |
| 5 | Other District Roads | 48819.93 | 50922.18 | 51219.67 |
| 6 | Sugarcane Roads | 1849.79 | 1848.35 | 1849.79 |
| 7 | Improvements to NilgirisGhat Roads | 94.51 | 40.00 | 90.00 |
| | Total | 81973.07 | 85209.78 | 85927.85 |

1.3.2 PHYSICAL PERFORMANCE

The length of roads renewed under Non plan maintenance during 2015-2016 and the target for 2016-2017 is given in **Table-8.**

TABLE 8: NON PLAN -PHYSICAL PERFORMANCE

(Length in km)

| Sl. No | Name of wing | Achievement 2015-2016 | Target 2016-2017 |
|---------------|------------------------------|------------------------------|-------------------------|
| 1. | Construction and Maintenance | 2842 | 3000 |
| | Total | 2842 | 3000 |

2. PERFORMANCE UNDER MAJOR SCHEMES AND KEY PROJECTS

During the year 2015-2016, an amount of **Rs. 6691.12 Crore** was provided in the Budget Estimate for Highways Department and the expenditure incurred under Plan Schemes is **Rs.5151 Crore.**

2.1 COMPREHENSIVE ROAD INFRASTRUCTURE DEVELOPMENT PROGRAMME (CRIDP)

In view of the need to augment the capacity of the roads, widening of all State Highways to Double Lane and widening of Major District Roads to Intermediate Lane has been given importance. During 2015-16 widening and improvements of **5062.18 km** roads, construction of **737 no** of culverts/ bridges/ protective works were taken up under this scheme for which **Rs.3460 Crore** was sanctioned.

During 2015-16, Road works to a length of **3700.36 km** and **553** Bridges / Culverts / Protective works have been completed incurring an expenditure of **Rs.2924.26 Crore.**

2.1.1 CRIDP - STATE HIGHWAYS

During 2015-16, **spill over works** of widening/improvements **to 918.73 km** length of roads and construction of **304** bridges/culverts/ protective works were taken up at a cost of **Rs. 1407.77 Crore.**

New works of widening/improvements to **1228.43 km** length of roads and construction of **254** bridges/culverts/ protective works have been sanctioned at a cost of **Rs.1321Crore** in the year 2015-16.

During 2015-16, widening/improvements in **962.31km** length of roads and **305** bridges/culverts/ protective works have been completed at an expenditure of **Rs.1299.09** Crore.

2.1.2 CRIDP - MAJOR DISTRICT ROADS

During 2015-16, spill over works of widening/improvements to **767.13 km** length of roads and construction of **130** bridges/culverts/protective works were taken up at a cost of **Rs. 748.20 Crore.**

New works of widening/improvements **to 941.31 km** length of roads and construction of **210 bridges**/culverts/protective works have been sanctioned at a cost of **Rs.728.90 Crore** in the year 2015-16.

During 2015-16, widening/improvements in **819.43 km** length of roads and **149** bridges/culverts/ protective works have been completed at an expenditure of **Rs.845.22 Crore.**

2.1.3 CRIDP - OTHER DISTRICT ROADS

During 2015-16, spill over works of widening/improvements to **1580.79 km** length of roads and construction of **72** bridges/culverts were taken up at a cost of **Rs.972.96 Crore**.

New works of widening/improvements to **2311.69 km** length of roads and construction of **264** bridges/culverts/protective works have been sanctioned at a cost of **Rs.1159.89 Crore** in the year 2015-16.

During 2015-16, widening/improvements in **1598.11 km** length of roads and **92** bridges/ culverts/ protective works has been completed at an expenditure of **Rs.705.22 Crore**.

2.1.4 CRIDP - OTHER DISTRICT ROADS – SPECIAL COMPONENT PLAN

During 2015-16, spill over works at a cost of **Rs.6.38 Crore** were taken up for execution.

New works of widening/improvements to **580.75 km** length of roads and construction of **9** bridges/culverts/protective works have been sanctioned at a cost of **Rs.250.23 Crore** in the year 2015-16.

During 2015-16, widening/improvements in **320.51 km** length of roads and **7** Bridges/ Culverts have been completed at an expenditure of **Rs.74.72 Crore**.

2.1.5 ERODE OUTER RING ROAD

In order to ease the heavy traffic congestion in Erode Town and to have a free flow of traffic, Government had accorded sanction for the formation of a ring road from Kokkarayanpettai to Thindal to a length of 14.80 km.

In Phase I & II, 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 and the stretch from km 2/2 to 7/6 respectively were completed under CRIDP scheme and opened for public use.

In Phase III, the work of formation of the outer ring road for a length of 7.20 km from km 7/6 to 14/8 including construction of Road Over Bridge at km 11/2 – 11/6 for **Rs. 69.30 Crore** was taken up Presently, 60% of work is completed and further work is in progress.

2.2 PART-II SCHEME

During the year 2015-16, spill over works of 13 buildings were taken up for construction. New works have been sanctioned for 26 buildings at a cost of Rs.7.50 Crore.

During 2015-16, 19 buildings have been completed at cost of Rs.5.48 Crore.

2.3 CHENNAI METROPOLITAN DEVELOPMENT PLAN (CMDP)

Chennai being a Metropolitan City is growing fast in all sectors. In order to meet the demand for good infrastructure, especially traffic improvements, Government have formed Chennai Metropolitan Area Development Plan during the year 2003 - 2004. So far, the Government has given its approval for 269 improvement works at a cost of Rs.2160.79 Crore which includes 482.47 km of Road works, 16 river Bridges, 14 Grade Separators 12 Railway Over Bridge/ Railway Under Bridge(including DPR for 2 ROB works), 1 Sky walk, 5 Pedestrian subways and 1 Foot Over Bridge.

Since 2015- 16, about 160.73 Crore have been spent for these works. Details of head wise expenditure incurred based on allocation of funds during 2015-16 is given below:

TABLE 9: EXPENDITURE DETAILS

| Sl. No | Head | Allocation for 2015 -16 (Rs. in lakhs) | Expenditure (Rs. in lakhs) |
|---------------|----------------|---|-----------------------------------|
| 1 | JW 1608 | 20000.00 | 10069.70 |
| 2 | KJ 1603 | 4999.98 | 906.12 |
| 3 | JD1601 Bridges | 7625.05 | 3363.02 |
| 4 | JT 1604 | 17218.05 | 1733.64 |
| 5 | JJ 1601 | 200.00 | 1.02 |
| | Total | 50043.08 | 16073.50 |

Out of total 482.47 km, so far 472 km of road works have been completed including Formation of new link road connecting MBI road at km 17/4 in Rajakilpakkam and Tambaram Eastern Bypass at Agaramthensalai (only completed LA portions) for a length of 3.05km.

Grade Separator at the intersection of Madhavaram High road with G.N.T Road at Moolakkadai, at a cost of Rs.49.55 Crore and Grade Separator at the intersection of Anna Nagar IInd Avenue and Mogappair road with Inner Ring road at Tirumangalam at a cost of Rs.60.23 Crore and River bridge at KM 16/6 of Tambaram-Mudichur- Sriperumbudhur road were completed and inaugurated by Hon'ble Chief Minister. Construction of additional river Bridges at km 62/2 of SingaperumalKoil- Sriperumbudhur-

Tiruvallur-Red Hills road at a cost of Rs. 2.00 Crore and Widening of River Bridge at km 3/4 of Mount Poonamallee –Avadi Road (SH55) at a cost of Rs. 1.00 Crore have been completed and opened for traffic.

Some of the Major works under implementations are detailed below.

2.3.1 GRADE SEPARATORS

1. At the intersection of N.S.K Salai (Arcot Road) with Inner Ring road at Vadapalani in Chennai at a cost of Rs.69.43 Crore, is being executed by the Chennai Metro Rail Limited in an integrated manner since the metro rail alignment and the Grade Separators are one and the same. The work is scheduled to be completed before February 2017.
2. At the intersection of Nelson Manickam road and Anna Nagar 3rd Avenue road in Periyar EVR Salai in Chennai at a cost of Rs.117 Crore is in progress.(Section I of the Grade separator at a cost of 35 Crore is completed and inaugurated by Hon'ble Chief Minister).The work scheduled to be completed before November 2016.
3. At the intersection of Mount - Poonamallee road with Kodambakkam - Sriperumbudur road at Porur at a cost of Rs. 54 Crore is in progress. The work scheduled to be completed before November 2016.
4. At the intersection of IRR near KolathurRettaiEri at Sembium Red Hill Road Junction (LHS) at a cost of Rs. 52.72 Crore is in progress. The work scheduled to be completed before October 2016.
5. At the junction of Kundrathur road and Santhai road at Pallavaram in GST road at a cost 80.74 Crore. The work is in progress.

6. At the junction of Taramani road, Tambaram–Velachery road and Velachery bypass in VelacheryVijayanagaram junction at a cost of 98.22 Crore. The work is in progress.
7. Connecting the junctions of Mofussil bus entrance of CMBT and KaliammanKoil road junction in Jawaharlal Nehru Salai (IRR) at a cost of 93.50 Crore. The work is in progress.
8. At Medavakkam – Sholinganallur road junction, Medavakkam – Mambakkam road junction and Mount – Medavakkam junction in MaramalaiAdigal Bridge – Irumbuliyur (MBI) road at a cost of 133.10 Crore. The work since commenced.
9. At the intersection of Mount Medavakkam road and Pallavaram-Thuraipakkam road near Kilkattalai at a cost of 58.22 Crore. The work is in progress.
10. Construction of Grade Separator at the intersection of IRR near KolathurRettaiEri at Sembium Red Hill Road Junction (RHS) at a cost of Rs. 29.13 Crore. Work order issued.
11. Construction of Grade Separator in ECR at Tiruvanmiyur Junction in Chennai (LA only) at a cost of Rs. 58.00 Crore.

2.3.2 RIVER BRIDGE WORKS

1. Construction of additional three lane bridge across coovam river at EVR salai near Aminjikai km 6/6 (upstream side) at a cost of Rs. 6.91 Crore is in progress.
2. Construction of Additional Two Lane Bridge at km 15/8 Mount –Poonamallee- Avadi Road at a cost of Rs. 5 Crore is in progress
3. Widening of the bridge at km 2/6 of Mount –Poonamallee – Avadi road at a cost of Rs. 15.46 Crore Retender called for.

4. Construction of bridge across Coovam river at Nolambur road at a cost of Rs. 36 Crore (LA only) LA is in progress.
5. Construction of high level bridge across Coovam river at km 0/6 from M.P. road at Paruthipattu at a cost of Rs. 3.10 Crore (LA only) LA is in progress.
6. Construction of high level bridge across "B" Canal at km 0/6 of Thiruvottriyur –Ponneri –Panchetty Road at a cost of Rs.53.31 Crore tender called for.

2.3.3 ROAD OVER BRIDGE AT RAILWAY CROSSING

Construction of ROB in lieu of LC No.3 between Thondiarpeta - Thiruvottriyur Railway station near Thiruvottriyur Mattu mandhai at a cost of Rs. 47.00 Crore is in progress and nearing completion.

2.3.4 ROAD WORKS

1. Widening and Strengthening of Taramani Link Road km.0/0-3/650. (TNUDP III) at a cost of Rs. 32.23 Crore. Out of 3.65 km 2.70 km completed. Balance of 0.950km have to be taken up after completion of Macro drain by PWD WRO.
2. Formation of link road and construction of bridge across Buckingham canal connecting Rajiv Gandhi and ECR at Neelankarai at a cost of Rs. 204.20 Crore LA is in progress.

2.3.5 PEDESTRIAN SUBWAYS

Construction of Pedestrian subway at five locations at a cost of Rs. 19.00 Crore in various stages are listed below

- i) GST road near little Mount AG Church–To be placed in RAS
- ii) Guindy MKN road – To be placed in RAS
- iii) Near Ekkattuthangal at km 1/6 of IRR– tender to be recalled
- iv) Near Kasi Theatre at km 2/7 of IRR– tender to be recalled
- v) Near Koyambedu bus terminus at 7/7 of IRR– DPR stage

2.3.6 FOOTOVER BRIDGE

Construction of Foot Over Bridge and skywalk with escalator at 26/8 of Grand Southern Trunk Road, Tambaram at a cost of Rs. 19.49 Crore for which estimate is under preparation.

2.3.7 PREPARATION OF DETAILED PROJECT REPORTS

Based on the studies and recommendations of CTTS, the Government has accorded administrative approval for the preparation of DPR for 14 works under CMDP Scheme. Out of 14 works, 2 works have been started. Land Acquisition is in progress for 3 works. Deletion proposal has been sent to Government for 1 work. 1 work is in tender stage. Remaining 7 works are in DPR stage. On completion of DPRs, the works will be taken up for implementation in the forthcoming years.

2.4 ROAD OVER / UNDER BRIDGES AT RAILWAY LEVEL CROSSINGS

Construction of Road Over Bridges and Road Under Bridges in lieu of existing level crossings in coordination with the Railways on 50:50 cost sharing basis are taken up under the Railway Works Programme.

Under the Railway Works Programme, **85** Spillover works were taken up in 2015-16, of which, **7 works** have been completed at a cost of **Rs. 181.37 Crore** and **48 works** are in progress for a value of **Rs. 1444.78 Crore**. The remaining works are in various stages of pre-construction.

In the year 2012-13, the Government has accorded Administrative Sanction for Rs.100.90 Crore to carry out preliminary works for 12 ROBs/RUBs, which are in various stages. In the year 2015-16, of these 12 works, Administrative Sanction

have been accorded for Rs. 117.42 Crore for 6 ROB/RUB works. Out of these 6 works, for 3 works viz., LC 8, LC 43 and LC 46 works are in progress. And for balance 3 works, LC 346, LC 38 and LC 6 – Palayamkottai, works will be taken up for execution during the current year. For the remaining 6 ROB/RUB works, the preliminary works are in progress.

In the year 2013-14, the Government has accorded Administrative Sanction for Rs. 231.49 Crore to carry out preliminary works such as Land Acquisition, Shifting of Service Utilities and Investigation for 18 ROB/RUBs. Of these, Administrative Sanction of Rs. 49.56 Crore have been accorded for the 2 works, viz., LC 123 and LC 34. For the ROB work at LC 123 Tender has been settled and work will be commenced shortly. The ROB work at LC 34 will be taken up for execution during 2016-17. Tender will be floated for these works shortly.

Out of the remaining 16 works, 3 works are in estimate stage, 11 works are in DPR stage and 2 works are in GAD stage.

A sum of **Rs. 205.65 Crore** has been spent for this scheme in 2015-16.

2.5 NABARD LOAN ASSISTANCE SCHEMES

2.5.1 CONSTRUCTION OF BRIDGES

In order to provide necessary road access in rural areas, bridge works with NABARD loan assistance are being carried out by Projects Wing. Under this scheme, spill over work of 1 river bridge have been taken up, to a value of Rs. 43.50 Crore in 2015-16, has been completed and opened to traffic on 14.02.2016.

A sum of **Rs. 11.18 Crore** has been spent for this scheme in 2015-16.

2.5.2 CONSTRUCTION OF BRIDGES IN GOVERNMENT AND RURAL ROADS

During the year 2015-16, spill over works of construction/reconstruction of 167 bridges in SH, MDR, ODR and Panchayat and Panchayat Union Roads at a cost of Rs.485.10 Crore and newly sanctioned 22 bridges with a cost of Rs 49.24 Crore, totally 189 Bridges with a cost of Rs. 534.34 Crore have been taken up for execution. Of these bridge works, 83 works are completed with an expenditure of Rs 202.56 Crore, 91 works are in progress and the remaining works are in pre-construction stage.

2.5.3 IMPROVEMENTS TO OTHER DISTRICT ROADS AND MAJOR DISTRICT ROADS

Under this scheme, 46 Roads to a length of 130.51 km at a cost of Rs. 77.00 Crore have been taken up for execution. Out of which 6 Roads to a length of 15.35 km has been completed incurring an expenditure of Rs 29.63 Crore. The balance works are in progress.

2.5.4 CONSTRUCTION OF RIVER BRIDGES ON GOVERNMENT ROADS

During the year 2015-16, spill over work of 1 bridge was taken up at a cost of Rs.3.68 Crore. An expenditure of Rs 1.99 Crore has been incurred.

2.5.5 RURAL ROADS SCHEME

Under this scheme, BT road connectivity is provided for villages with a population between 500-1000 including Bridges. During 2015-16, spill over work of construction of 1 bridge was taken up at a cost of Rs.1.17 Crore. Work held up due to transfer of Indian Air Force (IAF) land. Soon after completion of land transfer, work will be completed.

2.6 BYPASSES FOR MAJOR TOWNS

Bypasses play a major role in the diversion of through traffic and help in reduction of traffic congestion in major towns.

The status of bypass works being carried out is as follows:

TABLE 10: STATUS OF BYPASSES

| DESCRIPTION | Nos. |
|---------------------------------|-------------|
| Completed | 30 |
| In progress | 10 |
| LA work in progress (N &RR -11) | 37 |
| DPR work in progress | 9 |
| Works in consideration | 2 |
| Total | 88 |

2.7 TSUNAMI REHABILITATION PROGRAMME

Under Construction and Maintenance wing, during 2015-16, spill over works of 8 bridges to a value of Rs.42.66 Crore were taken up.

During 2015-16, 2 bridge works have been completed and an expenditure of Rs. 7.46 Crore has been incurred in this scheme.

2.8 WORKS IN CHENNAI EXTENDED CORPORATION AREA

In the newly extended Chennai Corporation Area, in the districts of Chennai, Tiruvallur and Kancheepuram Districts, development works on 250 km of roads such as end to end widening of roads, construction of foot path cum drain and providing footpaths have been identified for Rs. 1033 Crore, and in the first phase, Government has sanctioned Rs.250 Crore for

14 works of widening end to end, drain cum footpath in the districts of Chennai and Tiruvallur and these works are in progress.

In the second phase, 22 works has been sanctioned for **Rs.150 Crore** in the districts of Chennai, Tiruvallur and Kancheepuram.

During 2015-2016, 3 road works to a length of 9.55 km have been completed and an expenditure of Rs. 106.86 Crore has been incurred under this scheme and further works are in progress.

2.9 PERFORMANCE BASED MAINTENANCE CONTRACT (PBMC)

Performance Based Maintenance Contracting for roads is designed to increase the efficiency and effectiveness of road asset management and maintenance. PBMC ensures the physical condition of the roads under contract is adequate for the need of road users with comfort travel, over the entire period of the contract.

In Pollachi Division, Performance Based Maintenance Contract (PBMC) is being implemented in 191.40 km of State Highways (SH) roads and 185.98 km of Major District Roads for a period of five years at a cost of Rs.233.93 Crore. This scheme includes Initial Rectification, Periodical Renewal, Minor Improvements, Ordinary Maintenance and Emergency works.

During the year 2014-15, Initial rectification works for 152.59 km has been completed at a cost of Rs.124.16 Crore and Periodical Renewal carried out in 28.00 km during 2015-16 incurring an expenditure of Rs.25.84 Crore. During the year 2016-17, Periodical Renewal in 55.35 km has been taken up and works are in progress.

In continuation, during 2015-16, under Performance Based Maintenance Contract, for Improvement and maintenance of 307 km length of State Highways and 274 km length of Major District Roads **in Krishnagiri division**, sanction was accorded for Rs. 450 Crore. **In Ramanathapuram** Division, of 229 km length of State Highways and 340 km length of Major District Roads has been taken up for improvement and maintenance at a cost of Rs.460 Crore and works are in progress.

In Tiruvallur division, Improvement and maintenance of 498 km length of State Highways and 278 km length of Major District Roads has been taken up under Performance Based Maintenance Contract (PBMC), at a cost of Rs. 630.38 Crore and works are in progress.

2.10 ROAD SAFETY MEASURES

In order to reduce the road accident levels and improve safety measures, Government announced a special project to rectify the black spots in highly accident prone areas including urban roads.

During the year 2014-15, under Comprehensive Road Infrastructure Development Programme, an amount of Rs.245.30 Crore has been sanctioned for widening of culverts, metal crash barrier, junction improvements, construction of protective walls etc. as a part of Road Safety measure.

In addition, Government sanctioned Rs.200 Cr under an exclusive Road safety fund for Widening of narrow culvert, Construction of safety wall/crash barrier around the road side open well/tank bunds, Construction of center median, and junction improvements to improve the safety aspect of the road.

During the year 2014-15, under Road Safety scheme an amount of Rs.20.78 Crore has been incurred for the completed works.

During the year 2015-16, Government sanctioned Rs.200 Crore under CRIDP scheme for road safety works and Rs.100 Crore under Road safety fund.

During the year 2015-16, under Road Safety scheme 2113 works have been completed at an expenditure of Rs.99.57 Crore

2.11 NATIONAL HIGHWAYS WORKS

Tamil Nadu has 4994 km length of National Highways. Out of this 1985 km and 22 km length of roads are improved / maintained by National Highways wing and Construction & Maintenance wing of the State Government respectively utilizing the funds provided by Government of India. The balance 3009 km length of roads are being maintained by National Highway Authority of India (NHAI).

2.11.1 NATIONAL HIGHWAYS PLAN WORKS

During 2015-16, spill over works costing Rs.1322.80 Crore comprising of 24 road works having a length of 504.00 km and 8 bridge works were taken up. Further, the Ministry of Road Transport and Highways, Government of India has sanctioned 6 road works and 4 bridge works amounting to Rs.542.31 Crore under Annual Plan 2015-16 and one work of length 26.85 km amounting to Rs.656.51 Crore under NHDP Phase IV.

Out of the above, 13 road works having a length of 119.10 km and one bridge work have been completed at a cost of Rs.336.64 Crore

2.11.2 NATIONAL HIGHWAYS NON-PLAN WORKS

Under Periodical repairs (PR) /Improvement of Riding Quality programme (IRQP), 9 road works to a length of 125.09 km amounting Rs.73.69 Crore were taken up as spill over during 2015-16. In addition to this, Government of India (MORT&H) has sanctioned 12 new road works to a length of 155.13 km at a cost of Rs.97.99 Crore under PR/IRQP. In addition the Ministry has sanctioned 18 works to a length 241.62 km at a cost Rs.123.51 Crore under PR/IRQP 2016-17 - Phase-1 during January to March 2016.

Out of the above works, 280.21 km length of 18 road works have been completed at a cost of Rs.139.41 Crore during 2015-2016.

2.12 SCHEMES SPONSORED BY GOVERNMENT OF INDIA

2.12.1 REVAMPED CENTRAL ROAD FUND SCHEME

Under this scheme, 3 road works to a length of 44.30 km and one bridge work were taken up as spill over to a tune of Rs.41.67 Crore and 76 new road works of length 485.20 km and 2 Bridge works amounting to Rs.390.00 Crore were Administratively approved by the Government of India and financially sanctioned by the Government of Tamil Nadu.

Out of these, 6 road works to a length of 50.20 km have been completed at a cost of Rs.158.17 Crore during 2015-16.

2.12.2 INTER STATE CONNECTIVITY SCHEME

In the year 2015-16, Government of India (MORT&H) has sanctioned 2 road works to a length 95.85 km amounting to Rs.90.91 Crore for the year 2015-16 and these works are in progress.

2.12.3 PRADHAN MANTRI GRAM SADAK YOJANA PROGRAMME PHASE VIII (2012-13)

Under this programme, 330 Other District Road works to a length of 1062.55 km amounting to Rs.278.54 Crore have been taken up for upgradation. Out of these, 327 Other District Road works to a length of 1056.95 km have been completed at a cost of Rs.274.89 Crore till 2015-16.

2.12.4 PRADHAN MANTRI GRAM SADAK YOJANA PROGRAMME PHASE IX (2014-15)

Under this programme, 57 Other District Road works to a length of 164.04 km amounting to Rs.47.65 Crore have been taken up for upgradation. Out of these, 2 Other District Road works to a length of 5.40 km have been completed at a cost of Rs.15.14 Crore.

2.13 OTHER SPECIAL PROJECTS

2.13.1 ROAD OVER BRIDGE AT PALLIPALAYAM

During 2013-14, Government has accorded Administrative Sanction for Construction of Railway Over Bridge in State Highways 79 at km 90/2 in Nammakal district for **Rs. 40.16 Crore** was taken up as deposit work. Presently, 55% of work is completed and further work is in progress.

2.13.2 ROAD OVER BRIDGE AT AMBUR

During 2013-14, Government has accorded Administrative Sanction for preliminary works for **Rs.6.97 Crore** for construction of Railway Over Bridge at Bethlegam area in Ambur Town, between Ambur and Vaniyambadi Railway Stations in Vellore district. Design work is in progress.

2.13.3 HIGH LEVEL BRIDGE ACROSS NOYYAL RIVER NEAR CHIKKANA COLLEGE

The High level bridge sanctioned for Rs.3.85 Crore under CRIDP scheme in 2006-07 has been resumed in 2015-16 as the court case against this work came to an end. The work is in progress and will be completed in the next financial year.

2.13.4 CONSTRUCTION OF GRADE SEPARATOR IN ERODE DISTRICT

In 2013-14, Government has accorded Administrative Sanction for preliminary works for **Rs. 22.93 Crore** under deposit work for construction of Grade Separator at km 1/8 of Erode – Perundurai – Kangeyam Road Government hospital Junction. Preliminary work is completed, Administrative Sanction will be accorded for carrying out the main bridge work.

2.13.5 ROAD OVER BRIDGE FOR ELCOT AT MADURAI (DEPOSIT WORK)

During 2015-16, Government has accorded Administrative Sanction for **Rs.13.82 Crore** for construction of Railway Over Bridge across the SEZ in ELCOT in Vadapazhanji, between Madurai and Usilampatty Railway Stations in Madurai district. The work is in progress.

2.13.6 SUGARCANE ROAD DEVELOPMENT SCHEME

To form and improve the roads from sugarcane growing areas to sugar mills, the cess fund collected by the Agricultural Department from sugar mills is utilized.

9 New Road works and 1 High level bridge at a cost of Rs. 14.40 Crore have been taken up under this scheme and 7 road works have been completed at a cost of Rs. 9.04 Crore in the year 2014-15. In 2015-16, 1 High level bridge has been completed at a

cost of Rs. 2.60 Crore and 1 road work in Virudhunagar district has been completed.

2.13.7 CHENNAI OUTER RING ROAD

2.13.7.1 CHENNAI OUTER RING ROAD – PHASE I

Administrative sanctions have been accorded for the development of Chennai Outer Ring Road (CORR) Project Phase-1 as a Green Field Project with the formation of dual three lanes with service roads 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 Rs 1081.40 Crore.

Tamil Nadu Road Development Company Ltd has been appointed as the “Managing Associate” for this project.

The completed portion of the project road to a length of 27 km from Mannivakkam to Nemilichery has been inaugurated by the **Hon’ble Chief Minister of Tamil Nadu** on 28.08.2014 and put to public use.

At present 97% of works have been completed. The land acquisition process is expected to be completed by September 2016 and the balance 3% of works are targeted to complete by September 2017.

2.13.7.2 CHENNAI OUTER RING ROAD – PHASE II

The Government have sanctioned the Chennai Outer Ring (CORR) project Phase-II, a major six lane road connectivity project to a length of 30.50 km from Nemilichery in NH-205 to Minjur in ThiruvottiyurPonneriPancheti (TPP) Road via Padiyanallur in NH-5 at a cost of Rs.1075 Crore under the Design, Build, Finance, Operate and Transfer (DBFOT) with Semi Annual Annuity payment.

Tamil Nadu Road Development Company Ltd has been appointed as “Managing Associate” for Chennai Outer Ring Road Project Phase-II.

The **Hon'ble Chief Minister of Tamil Nadu** laid Foundation Stone for Chennai Outer Ring Road Phase-II on 28.08.2014.

At present 82% of works have been completed and the balance works are in progress. The project has to be completed by September 2016 as per Concession Agreement. But due to heavy rainfall in November and December 2015 resulting in heavy floods affecting the project work, the project is likely to be extended upto December 2016.

2.13.8 ENNORE MANALI ROAD IMPROVEMENT PROJECT (EMRIP)

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.

NHAI, the project lead sponsor, has engaged TNRDC as its Managing Associate and subsequently as Supervision Consultant.

As on date, 93% of the works have been completed and the remaining works will be completed soon.

2.13.9 IMPROVEMENTS TO NORTH CHENNAI THERMAL POWER STATION ROAD (INCLUDING ATHIPATTU ROB) AND ENNORE PORT ROAD

M/s. Toshiba, a Japanese concern-JSW (JV) Turbine and Generator Pvt. Ltd. have set up a manufacturing plant in Andarkuppam km.6/150 of Thiruvottiyur – Ponneri -Panchetti Road. The heavy Special Transport Vehicle (525 MT) 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, Thiruvottiyur-Ponneri-Panchetti Road which is

part of the Ennore Manali Road Improvement Project (EMRIP) is being improved in EMRIP project.

This is an unique project in which the road and bridges are designed to sustain 525 MT Special Over designed Cargo for the first time in Tamil Nadu. The Railway bridge also faces massive technical Challenges because of the difficult terrain, area wise and location being proximate to the sea. All these challenges have been overcome successfully and all the bridges have been completed and tested successfully.

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

TNRDC is the Managing Associate for this project.

All the works have been completed and the **Hon'ble Chief Minister of Tamil Nadu** inaugurated the project on 14.02.2016. M/s Toshiba have successfully transported the manufactured equipment from its plant by Special Transport Vehicle (STV) carrying Over Dimensional Cargo (ODC) through the project road and bridges on 11.04.2016 to Ennore Port.

2.13.10 NORTHERN PORT ACCESS ROAD (CHENNAI PERIPHERAL ROAD PHASE-I)

The proposed Northern Port Access Road is an important link to the fast growing Ennore and Kattupalli Ports which handle major cargo movements. The proposed new road will connect the Northern Gate of Ennore Port and 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 Kattupalli Ship Yard by L&T.

The total length of this road connecting Ennore Port to Thatchur will be about 21.15 km and length of the TPP link Road will be 4.35 km.

The work is proposed for execution in two phases as under:

Phase-I: Construction of the road from Ennore Port entrance to Neidavoyal village (km 0/0 to km 6/200, from Neidavoyal village to Vallur Link road (km 4.350) totaling 10.550 km length.

Phase-II: Construction of the balance portion of length 14.95 km from Neidavoyal to Thatchur in NH-5.

The Government in G.O.(Ms).No.33 Highways and Minor Port (HF2) Department, dated 19.02.2016 accorded administrative sanction for Northern Port Access Road for a sum of Rs. 951 Crore (Rupees Nine Hundred and Fifty One Crore only) towards land acquisition in 15 Villages of Ponneri Taluk in Thiruvallur District and the land acquisition is under process.

2.13.11 WIDENING OF EAST COAST ROAD FROM DOUBLE LANE INTO FOUR LANE FROM KM.22/300 TO KM 55/800 INCLUDING IMPROVEMENTS TO 13 CURVED STRETCHES AND 7 JUNCTIONS FROM KM 55/800 TO KM.135/500

The East Coast Road, from Akkarai to Koonimedu on outskirts of Puducherry state limit was initially improved to two lane carriage way with hard shoulders and maintained by TNRDC as a Toll Road from 24th March 2002. The increasing traffic, intensity is the cause of increased accident rates in the absence of centre median besides insufficient carriage way necessitated the widening of this road to four lane with divided carriage way from Akkarai to Mamallapuram as phase I, including geometric improvements to curves and junctions between Mamallapuram and Puducherry border wherever necessary.

Accordingly, administrative sanction was accorded by the Government for Rs. 272.10 Crore. Out of this, a sum of Rs. 108.84 Crore funded by the Government as Viability Gap Fund which is 40% of Project Cost to TNRDC. The balance amount has to be mobilized by TNRDC.

The work commenced on 28.2.2014 and 77% of the works have been completed as on date. The balance work is expected to be completed by August 2016

- ❖ Out of 33.5 km on LHS & RHS, dual two lane carriage way a length of 28 km on LHS and a length of 27 km on RHS have been completed. Balance works are in progress.
- ❖ Out of 13 Curve improvement works, 7 works completed and out of 7 junctions improvement works 3 completed. The balance works are held up owing to stay order of Hon'ble National Green Tribunal (Southern Zone).

All the works from km 22/300 (Akkarai) to km 55/800 (Mahabalipuram) are targeted to complete by August 2016.

2.13.12 CONSTRUCTION OF NEW HIGH LEVEL 4-LANE BRIDGE ACROSS RIVER PALAR AT KM: 76/000 AT VAYALUR, ECR

The construction of "New High Level 4-lane Bridge across river palar at km 76/000 at Vayalur, East Coast Road" was completed and inaugurated by the **Hon'ble Chief Minister of Tamil Nadu** on 14.02.2016 and was opened to traffic from 14.02.2016 onwards.

2.13.13 RAJIV GANDHI SALAI (IT CORRIDOR)

2.13.14 PHASE I:

The Rajiv Gandhi Salai (IT Corridor) Phase-I was developed as a dual three lane road from Madhya Kailash to Siruseri for a length of 20.10 km. The link road connecting Sholinganallur and East Coast Road for a length of 2.15 km was also included in the project and was widened to a four lane road. This road is being maintained as a toll road.

Phase II:

In view of extending the Phase-I of Rajiv Gandhi Salai (IT Corridor) upto Mahabalipuram, the Government has proposed the formation of six lane road from Siruseri to Mahabalipuram for a length of 25 km, including two bypasses (Kelambakkam and Thiruporur) in Phase- II of Rajiv Gandhi Salai, under a viable financial arrangement through public private partnership.

The Government have sanctioned Rs.294.68 Crore for land acquisition works in First Phase. An extent of 88.62 Hectares is required to be acquired in 13 villages for widening this road to a right of way width of 60m and out of 32.40 Hectares have been acquired so far in 7 villages and the Land Acquisition process in respect of the balance extent of lands is in progress under various stages.

The Consultant had submitted the final Detailed Project Report (DPR) for phase II. The estimated Project Cost as per the DPR is Rs. 573.99 Crore. The Government have decided to implement the two Bypasses for Kelambakkam and Tiruporur in the first stage. The total estimated cost for Kelambakkam and Tiruporur bypass as per the SOR 2014-15 works out to

Rs. 268.10 Crore. The detailed estimate has been sent to the Government for Administration Sanction.

2.13.15 MULTI LEVEL CAR PARKING (MLCP) AT SIRUSERI

The Honourable Chief Minister of Tamil Nadu has made an announcement for "The Construction of a Multi-Level Car Parking (MLCP) at Siruseri, under Public Private Partnership mode". It will be designed with 20 floors to accommodate 2000 cars and Bus Parking area to park 50 buses at a time. The project will be executed under Design, Build, Finance, Operate and Transfer (DBFOT) basis. The cost estimate is Rs. 200 Crore.

The concession period is fixed as 20 years including 24 months construction period.

The consultancy services for the preparation of Detailed Feasibility Report (DFR) was awarded and the consultant had submitted the DFR and RFP document for calling tenders. Tender Notice for appointment of Concessionaire was published on 06.06.2016 with 08.07.2016 as last date for receipt of tender. However, no bids were received. The project is being reviewed and will be retendered in due course.

2.13.16 ELEVATED ROAD

The Honourable Chief Minister of Tamil Nadu has made an announcement for the construction of an Elevated Road from Taramani to Siruseri under Phase-I and from Siruseri to Mahabalipuram under Phase-II, for a total length of 45 km. Administrative sanction of Rs.5 Crore has been accorded for the preparation of DPR for the above work.

At present, the consultant had submitted the final draft DPR for phase-I and II and the Technical Expert Committee, comprising

of Officials from Government and TNRDC has reviewed the DPR and offered their remarks. The consultant has conducted stakeholders meeting on 04.07.2016 and the final DPR is under preparation, considering the inputs by the various sectors.

2.13.17 CONSTRUCTION OF GRADE SEPARATOR IN ERODE DISTRICT:

In 2013-14, Government has accorded Administrative Sanction for preliminary works for **Rs. 22.93 Crore** under State funds work for construction of Grade Separator at km 1/8 of Erode - Perundurai - Kangeyam Road Government hospital Junction. On preparation of DPR, Administrative Sanction will be accorded for carrying out main bridge works.

2.13.18 ERODE OUTER RING ROAD (PHASE III):

In Phase III, the work of formation of the outer ring road for a length of 7.20 kms from km 7/6 to 14/8 including construction of Road Over Bridge at km 11/2 - 11/6 for Rs. 69.30 Crore was taken up under State funds and the work is in progress.

2.13.19 SUGARCANE ROAD DEVELOPMENT SCHEME

To form and improve the roads from sugarcane growing areas to sugar mills, the cess fund collected by the Agricultural Department from sugar mills is utilized.

9 New Road works and 1 High level bridge at a cost of Rs. 14.40 Crore were taken up as under this scheme and 7 road works have been completed at a cost of Rs. 9.04 Crore and the other works are in progress.

2.13.20 ORAGADAM INDUSTRIAL CORRIDOR PROJECT

Considering the speedy development of Industries in and around Sriperumpudur in Kancheepuram District, it was decided

during the year 2005-06 to improve the road infrastructure facilities in Oragadam Industrial Park at an estimated cost of Rs.300 Crore in Phase-I, Rs.86.65 Crore in Phase-II in 2011-12, Rs.115 Crore in Phase-III in 2014-15 and Rs.189.81 Crore in Phase-IV in 2015-16. The scheme is under implementation with the revised estimated cost of Rs.547.82 Crore for Phase-I and Rs.108.66 Crore for Phase-II.

2.13.20.1 **ORAGADAM INDUSTRIAL CORRIDOR PROJECT
PHASE - I**

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

(a) Singaperumalkoil-Sriperumpudur road (SH-57) km 0/6 to 24/6 (24.00 km) – Widening the road to four lane with centre median

(b) Vandalur – Wallajabad road (SH-48) km 30/4 to 63/8 (33.40 km) – Widening the road to four lane with Centre median.

(c) Construction of a Grade Separator at Oragadam junction in Vandalur-Wallajabad road.

Out of 57.40 km, 55.10 km have been completed in Phase-I work. Balance 2.30 km, will be completed after the completion of LA. The work of construction of a Grade Separator at Oragadam junction has been completed and in public use.

All the works in the first phase will be completed by December 2016. The total expenditure incurred in phase I is Rs.463.00 Crore which includes the expenditure of Rs.184.62 Crore for Land acquisition.

2.13.20.2 **ORAGADAM INDUSTRIAL CORRIDOR PROJECT-
PHASE - II**

In second phase, the following work was taken up for implementation.

(a) Improvements to the existing four laning to six laning at km 12/6 to 24/6 in Singaperumalkoil – Sriperumpudur road.

In second phase, out of 12 km, 11.20 km (excluding Sriperumpudur and Mathur LA stretches) has been completed during march 2016 and balance 0.80km will be taken up after the completion of LA. An expenditure of Rs. 96.41 Crore has been incurred so far. The Phase-II works will be completed during this financial year.

2.13.20.3 **ORAGADAM INDUSTRIAL CORRIDOR PROJECT -
PHASE - III**

In **third phase**, the following work was taken up for implementation.

The widening of stretch from km.0/6 to 12/6 Singaperumalkoil – Sriperumpudur road from four laning to six laning.

In third Phase, Out of 12.00km 5.80km have been completed. Out of balance 6.20km, 4.70km work is in progress and remaining 1.50km will be taken up after completion of Land Acquisition. An expenditure of Rs.74.09 Crore has been incurred so far. The phase-III works will be completed during this financial year.

2.13.20.4 **ORAGADAM INDUSTRIAL CORRIDOR PROJECT -
PHASE – IV**

In **Fourth phase**, the following work was taken up for implementation.

Improvements from four laning to six laning at km 30/400 to 47/000 in Vandalur – Wallajabad road including Land Acquisition for Padappai bypass.

In fourth Phase, Out of 16.60km, in 4.20km work is in progress in various stages. The phase-IV works will be completed during the next financial year.

2.13.21 FOUR LANING OF MADURAI RING ROAD

It is proposed to widen the Madurai Ring Road from double lane to four lane from km 0/0 – 27/2 under BOT (Toll) for the total length of 27.20km by widening on both side so as to have a 9.0m carriageway on either sides with centre median of 1.20m. Further it involves widening of 2 Railway Over Bridges and 1 River bridge. The project is to be executed under BOT basis through Tamil Nadu Road Infrastructure Development Corporation (TNRIDC).

For this work, agreement has been executed and preliminary activities are in progress.

Total Cost of this project is Rs.213.69 Crore including Viability Gap fund of Rs.77.00 Crore. Total Toll period for this project is 18 years and construction period for this project is 2 years. Preliminary activities are in progress.

2.14 DESIGN WORKS COMPLETED

During the year 2015-2016, Preparation of Design, Estimate and Drawings for **10** Railway Over Bridges / Railway under Bridges, **20** River Bridges, **1** Grade Separators, **2** Limited use subway, **7** Redesign, **1** Retaining wall and proof checking of DPR's prepared by the consultant for **2** Railway Over Bridges / Railway under Bridges, **8** River Bridges, **5** Fly over, **2** Foot over bridge, **2** Pedestrian Subway, and Revised Design for **1** Bridge work totaling **61** works have been completed by this wing so far.

WORKS COMPLETED (From 01.04.2016 to 31.05.2016)

During the year 2016-2017, Preparation of Design, Estimate and Drawings for **2** Railway Over Bridges / Railway under Bridges, **3** River Bridges, and proof checking of DPR's prepared by the consultant for **1** Limited use subway, **1** Foot over bridge, Revised Design for **1** Bridge works totaling **8** works have been completed by this wing so far.

2.15 TAMIL NADU ROAD SECTOR PROJECT (TNRSP)

The Tamil Nadu Road Sector Project I was implemented through the World Bank loan assistance at a total project cost of Rs. 2442 Crore from 2004 to 2012. Works taken up under the project include - Up gradation of 725 km of roads, Enhanced Maintenance Works in 1330 km of roads, Road Safety, Black Spot Improvement Works and Institutional Development etc. On successful completion of Phase I of the Project, Strategic Option Study II was carried out to arrive at candidate projects for improvement through World Bank and other financial agencies. This study was conducted through M/s. Indian Institute Technology Madras (IITM), Chennai and as part of this, roads to a length of 2867 km were analysed and prioritized based on economic return consideration.

The Tamil Nadu Infrastructure Development Board (TNIDB) under the Chairmanship of Hon'ble Chief Minister allotted an amount of Rs. 65 Crore to carry out the Detailed Project Report (DPR) Preparation for 2079 km of roads selected through economic priority. DPR preparation for the selected roads have been taken up through five Consultants and so far been completed

in 573 km length of roads. Preparation of Detailed Project Report for the remaining works are in the final stage of completion.

The World Bank appraisal mission for the initial phase of the Project was completed in December 2014. The Loan Agreement and Project Agreement were signed on 28.05.2015. The World Bank has approved to fund the following components and the works are in progress.

- **Upgradation and maintenance through EPC contracts :**

Construction of civil works for widening and upgrading of approximately 427 km of roads of Core Road Network (CRN) to two-lane with paved shoulders standards through ten (10) EPC contracts including maintenance for a 5-year period after the construction, at a cost of Rs 2414.28 Crore is in progress.

- **Up gradation and maintenance through Public Private Partnership (PPP) concessions:**

For construction of civil works for widening and upgrading of approximately 146 km of roads of CRN, to four-lane standards and maintenance during the concession period, estimates have been prepared at a cost of Rs. 1499.06 Crore, adopting modified annuity mode. After obtaining final no objection of the World Bank, tenders will be invited.

- **Maintenance through Multi-year Performance-based Maintenance Contracts:**

Maintenance of approximately 597 km of CRN upgraded under TNRSP-I (Arcot – Tiruvarur & Nagapattinam –

Thoothukudi) for a 5-year period, at a cost of Rs.239 Crore is in progress.

- **Institutional Capacity Enhancement (ICE)**

Government have given in- principle approval for the Institutional capacity Enhancement (ICE) components of the project covering institutional restructuring for effective functioning, policy reforms with an aim to accelerate road development in the State and being implemented through the Director General (H).

- **Road Safety (RS)**

Governments have given in-principle approval for the road safety components of this project and are being implemented by the Director General (H) in co-ordination with the Transport Department.

- **Land acquisition (LA) and Resettlement and Rehabilitation (R& R)**

A Resettlement Policy Frame work (RPF) has been prepared for the project in line with the new Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) ACT 2013 and the World Bank Operational guidelines and the same work approved by the Government. This is being implemented.

II. MINOR PORTS WING

3. TAMIL NADU MARITIME BOARD

The State of Tamil Nadu has a coast line of about 1076 Kms. Along this coastline, 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.

M/s. Chemplast Sanmar Ltd., import Vinyl Chloride Monomer (VCM) for their P.V.C. factory established at Cuddalore SIPCOT Complex through their Captive Marine Terminal Facility (MTF) located within the port limits of Cuddalore Minor port.

M/s Chennai Petroleum Corporation Ltd., (CPCL) export Petroleum Products from their Narimanam (Nagapattinam District) refinery through their captive open sea jetty located within the port limits of Nagapattinam port. Edible oil import take place at Nagapattinam port regularly.

Small ships are piloted through Pamban Channel.

Kanyakumari and Rameswaram ports are used for short trip passenger ferry service.

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

Kattupalli Port (Thiruvallur District), Ennore Minor Port (Thiruvallur District) and Thirukkadaiyur Port (Nagapattinam District) operate the port either for import / export of cargo for their captive industry. Kattupalli Port has been permitted to handle commercial cargo also.

3.1 COMMODITY HANDLED IN MINOR PORTS.

3.1.1 TABLE 11: GOVERNMENT PORTS.

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

3.1.2 TABLE 12: CAPTIVE PORTS.

| Sl. No. | Port | Shipped | Landed |
|----------------|-------------------|----------------|---|
| 1. | Kattupalli Port | Containers | Shipbuilding and ship repair activities take place @ Kattupalli Port, General cargo |
| 2. | Ennore Minor Port | | Liquid Ammonia |
| 3. | Thirukkadaiyur | | Naphtha and Natural Gas. |

3.2 PORT DEVELOPMENTS

3.2.1 GOVERNMENT PORTS.

3.2.1.1 CUDDALORE PORT

M/s. Chemplast Sanmar Limited has developed Marine Terminal Facility (MTF), within Cuddalore port limits and handling Vinyl Chloride Monomer (VCM) required for the Poly Vinyl Chloride (PVC) factory, established at SIPCOT Complex.

The cargo handled at this port during the year 2015 - 2016 is detailed below:-

Table 13: LANDED

| Sl. No. | Commodity | No. of Ships | Quantity (in M.T) |
|----------------|------------------------|---------------------|--------------------------|
| 1 | Vinyl Chloride Monomer | 33 | 257602 |
| 2 | Machineries | | 94 |
| 3 | Miscellaneous | | 107 |
| | Total (A) | 33 | 257803 |

Table 14: SHIPPED

| Sl. No. | Commodity | No. of Ships | Quantity (in M.T) |
|----------------|--------------------------|---------------------|--------------------------|
| 1 | Petroleum Products | - | 165 |
| 2 | Iron | - | 1 |
| 3 | Miscellaneous | - | 999 |
| 4 | Machineries | - | 102 |
| | Total (B) | | 1267 |
| | Grand Total (A+B) | 33 | 259070 |

LANDED & SHIPPED DETAILS

| LANDED | | | SHIPPED | | |
|--------------------------|---------------------|--------------|------------------|---------------------|--------------|
| Commodity | No. of Ships | Units | Commodity | No. of Ships | Units |
| Barrels | - | 7 | Empty Barrels | - | 9 |
| Total (C) | - | 7 | Total (D) | - | 9 |
| Grand Total (C+D) | | | | - | 16 |

(A+B+C+D) **Total No. of ships - 33**

3.2.1.2 **NAGAPATTINAM - CPCL PORTS.**

M/s. Chennai Petroleum Corporation Limited, Chennai has developed an open sea Trestle Jetty, within Nagapattinam port limits and handling Crude Oil and petroleum products for their refinery established at Nagapattinam.

The cargo handled at this port during the year 2015 - 2016 is detailed below:-

Table 15: LANDED

| Sl. No. | Commodity | No. of Ships | Quantity (in M.T) |
|---------|------------------|--------------|-------------------|
| 1 | Crude Oil | - | 3212 |
| 2 | Miscellaneous | - | 7 |
| 3 | RBD Palm oil | - | 30050 |
| | Total (A) | - | 33269 |

Table 16: SHIPPED

| Sl. No. | Commodity | No. of Ships | Quantity (in M.T) |
|---------|--------------------------|--------------|-------------------|
| 1 | Naphtha | 32 | 206613 |
| 2 | HSD | - | 56850 |
| 3. | Cement | - | 1220 |
| 4. | Miscellaneous | - | 1990 |
| 5. | Petroleum products | - | 88 |
| 6 | Kerosene | -- | 3960 |
| | Total (B) | 32 | 265453 |
| | Grand Total (A+B) | 32 | 298722 |

3.2.1.3 **PAMBAN PORT**

This port is situated in Rameswaram Island of Ramanathapuram district. The only function at this port is to pilot small drafted vessels passing through Pamban Channel in the Gulf of Mannar. 256 vessels were piloted at this port during the year 2015 - 2016.

3.2.1.4 **RAMESWARAM PORT**

This port is situated in Rameswaram Island of Ramanathapuram district. A short distance passenger ferry service near Agnitheertham in Rameswaram is available. 1,45,127 passengers were ferried during the year 2015 - 2016.

3.2.1.5 **KANYAKUMARI PORT**

This port, situated in Kanyakumari district, is solely meant for facilitating ferry service between shore and Vivekananda Rock Memorial / AyyanThiruvalluvar Statue. M/s. Poompuhar Shipping Corporation Limited is operating this ferry service. Tamil Nadu Maritime Board is supervising the ferry service and derive establishment charges from the Corporation. 19,91,786 passengers were ferried during the year 2015 - 2016.

3.2.1.6 **COLACHEL PORT**

The Ministry of Shipping, Government of India, New Delhi has informed to the Government of Tamil Nadu that it is proposed to develop Colachel port through a Special Purpose Vehicle (SPV) and they welcome the participation of Tamil Nadu Maritime Board as an equity partner (upto 26%) in the SPV. In reply to this letter, the Chief Secretary to Government of Tamil Nadu addressed to the Secretary to Government of India, Ministry of Shipping has informed that the Government of Tamil Nadu will provide necessary facilitation, cooperation and support for implementation

of Colachel port (Enayam) in Kanyakumari district by Government of India as a major transshipment port.

3.2.2 CAPTIVE PORTS

3.2.2.1 KATTUPALLI PORT

M/s L&T Shipbuilding Limited have commenced operation at this port. Containers and general cargo are handled at this port. Shipbuilding and ship repair activities are taking place regularly.

The cargo handled at this port during the year 2015 - 2016 is detailed below:-

Table 17: LANDED

| Sl. No. | Commodity | No. of Ships | Quantity (in M.T) |
|---------|----------------------------|--------------|-------------------|
| 1 | Fabricated Steel Structure | 37 | 218719 |
| 2 | Timber logs | 1 | 4102 |
| 3 | Machineries | - | 348 |
| 4 | HSD | 1 | 330 |
| 5 | Miscellaneous | - | 9 |
| | Total (A) | 39 | 223508 |

Table 18: SHIPPED

| Sl. No. | Commodity | No. of Ships | Quantity (in M.T) |
|---------|--------------------------|--------------|-------------------|
| 1 | Machineries | 10 | 7128 |
| 2 | Miscellaneous | - | 6315 |
| 3 | Granite | 1 | 6477 |
| | Total (B) | 11 | 19920 |
| | Grand Total (A+B) | 50 | 243428 |

Table 19: LANDED & SHIPPED DETAILS

| LANDED | | | | SHIPPED | | |
|--------------------------|------------------|--------------|--------------|------------------|--------------|--------------|
| Sl. No. | Containers | No. of Ships | Units | Containers | No. of Ships | Units |
| 1 | 20 Ft Loaded | } | 11660 | 20 Ft Loaded | } | 9910 |
| 2 | 40 Ft Loaded | | 10378 | 40 Ft Loaded | | 11559 |
| 3 | 20 Ft Empty | | 1225 | 20 Ft Empty | | 11708 |
| 4 | 40 Ft Empty | | 1708 | 40 Ft Empty | | 14912 |
| | Total (C) | | 24971 | Total (D) | | 48089 |
| Grand Total (C+D) | | | | | 150 | 73060 |

LANDED & SHIPPED DETAILS

| LANDED | | | | SHIPPED | | |
|--------------------------|---------------------|--------------|------------|------------------|--------------|------------|
| Sl. No. | Commodity | No. of Ships | Units | Commodity | No. of Ships | Units |
| 1 | Heavy Motor Vehicle | 3 | 121 | Trucks | - | 6 |
| | Total (E) | 3 | 121 | Total (F) | - | 6 |
| Grand Total (E+F) | | | | | 3 | 127 |

(A+B+C+D+E+F) Total No. of ships - 203

3.2.2.2 ENNORE MINOR PORT

This port is also situated in Thiruvallur district. The port, consisting the marine structures of Multiple Buoy Mooring System with submarine pipelines for receiving Liquid Ammonia, had been developed by M/s. Coromandel International Ltd., Chennai.

During the year 2015 - 2016, 6 vessels called at this port and 30,000 M.Ts. of Liquid Ammonia has been handled.

3.2.2.3 **THIRUKKADAIYUR PORT**

This port situated in Nagapattinam district was declared for the captive use of M/s. PPN Power Generating Company so as to handle Naphtha and Natural gas required for their 330 MW gas combined Cycle Power Project at Pillaiperumalnallur. This Port is in operation since 2001.

The cargo handled at this port during the year 2015 – 2016 is detailed below:-

Table 20: LANDED

| Sl. No. | Commodity | No. of Ships | Quantity (in M.T) |
|----------------|------------------|---------------------|--------------------------|
| 1 | Naphtha | 2 | 21,855 |
| 2 | Gas | - | 480 |
| 3 | Crude Oil | - | 2,221 |
| | Total | 2 | 24,556 |

Table 21: SHIPPED

| Sl. No. | Commodity | Quantity (in MMBTU) |
|----------------|------------------|----------------------------|
| 1 | Gas | 762989.07 |

3.2.3 **CARGO TRAFFIC**

During the year 2015 - 2016, Minor Ports in Tamil Nadu handled total cargo of 8,55,776 Metric Tons, 73,060 nos. Container and General cargo 143 through 276 vessels.

3.3 TAMIL NADU MARITIME ACADEMY

The Tamil Nadu Maritime Academy at Thoothukudi is functioning under Tamil Nadu Maritime Board. The Academy has so far conducted 25 batches of pre-sea (GP) rating courses. It is conducting General Purpose Crew training Course of 6 months duration with 40 trainees per batch. The Academy is also conducting STCW-2010 courses namely, 'Personal Survival Techniques', 'Elementary First Aid', 'Personal Safety and Social Responsibility', 'Oil Tanker Familiarization' and 'Fire Prevention and Fire Fighting' . The 26th batch of GP rating course has commenced from January 2016.

4. POOMPUHAR SHIPPING CORPORATION LIMITED

Poompuhar Shipping Corporation Limited (PSC) was formed on 11.04.1974 under the Companies Act, 1956 with the objective of transporting the coal required for the thermal power stations of Tamil Nadu Generation and Distribution Corporation (TANGEDCO). PSC has acquired three specially designed shallow draft geared bulk carriers of 40000 DWT each between August 1985 and January 1987 which are exclusively utilized for this purpose.

The Dead Weight Tonnage (DWT) of the vessels were increased to 45000 M.T during dry docking of the vessels as follows:

TABLE 22: CARRYING CAPACITY OF THE VESSELS

| Name of the vessels | Month and year | Total carrying capacity (MT) |
|----------------------------|-----------------------|-------------------------------------|
| M.V.TamilKamaraj | November 2004 | 45000 |
| M.V.TamilPeriyar | May 2005 | 45000 |
| M.V.Tamil Anna | November 2005 | 45000 |

In addition to its own three ships, PSC also charters ships from Private Shipping Companies to transport the coal required by TANGEDCO for the various Thermal Power Stations in Tamil Nadu.

4.1 MOVEMENT OF COAL

4.1.1 COAL MOVEMENT FOR TANGEDCO

The coal required by TANGEDCO is transported from the load ports at Haldia, Paradip and Vizag and discharged at Kamarajar Port, Ennore and V.O. C Port, Tuticorin.

4.1.2 COAL MOVEMENT FOR NTECL

The corporation is also transporting coal through chartered vessels for M/s. NTPC Tamil Nadu Energy Company Ltd., (NTECL), a joint venture Company of TANGEDCO and NTPC, from the load ports of Paradip / Dhamra to Kamarajar Port, Ennore for their 3 x 500 MW thermal power stations at Vallur, North Chennai, as per the Memorandum of Understanding.

The details of linkage of coal, arrival of coal at load ports and coal moved by own and chartered vessels for the last two years are as follows:

Table 23: COAL MOVEMENT

| Year | Target for coal movement | Coal arrived at load ports | Coal moved by chartered vessels | Coal moved by own vessels | Total coal moved | Achievements |
|--------------------------|--------------------------|----------------------------|---------------------------------|---------------------------|------------------|--------------|
| (In lakhs Metric Tonnes) | | | | | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 2014-15 | 230.44 | 162.68 | 127.96 | 33.58 | 161.54 | 99.30% |
| 2015-16 | 262.51 | 192.63 | 159.49 | 32.52 | 192.01 | 99.68% |

4.2 PHYSICAL AND FINANCIAL PERFORMANCE

4.2.1 PHYSICAL PERFORMANCE

Physical performance of own and chartered vessels for the period 2014-2015 and 2015-16 are as follows:

Table 24: PHYSICAL PERFORMANCE

| | 2014-15 | 2015-16 |
|--------------------------------------|---------|---------|
| OWN VESSELS | | |
| No. of vessels | 3 | 3 |
| No. of voyages | 75 | 73 |
| Quantity of coal moved (in lakhs MT) | 33.58 | 32.52 |

| | | |
|---|---------|---------|
| | 2014-15 | 2015-16 |
| Average quantity of coal moved per voyage in MT | 44773 | 44554 |
| CHARTERED VESSELS | | |
| No. of Vessels | 11 | 13 |
| No. of voyages | 231 | 277 |
| Quantity of coal moved (in lakhs MT) | 127.96 | 159.49 |
| Average quantity of coal moved per voyage in MT | 55394 | 57576 |
| Total quantity moved (in lakhs MT) | 161.54 | 192.01 |

4.2.2 FINANCIAL PERFORMANCE

The overall financial performances of the corporation during the last three financial years are as follows:

TABLE 25: FINANCIAL PERFORMANCE OF PSC

(Rs.in Crore)

| Year | Turn Over | Profit |
|-----------|-----------|--------|
| 2013-2014 | 667.21 | 6.85 |
| 2014-2015 | 628.12 | 6.89 |
| 2015-2016 | 559.76* | 7.68* |

* provisional

4.3 KANYAKUMARI FERRY SERVICE

Besides transporting of coal to M/s TANGEDCO and M/s NTECL, PSC is also operating ferry services from the shore of Kanniyakumari to Vivekananda Rock Memorial and the AyyanThiruvalluvar Statue. The physical and financial performances of the ferry service for the last two years are given below:

**Table 26: PHYSICAL & FINANCIAL PERFORMANCE
OF FERRY SERVICE**

| | 2014-2015 | 2015-2016 |
|--------------------------------------|-----------|-----------|
| No. Of Ferry in service | 3 | 3 |
| No. of Passengers ferried (In lakhs) | 19.42 | 19.80 |
| Fare collection (Rs. in lakhs) | 716.27 | 665.56 |
| Operational Profit (Rs. in lakhs) | 332.36 | 192.41* |

*provisional

Edappadi K. Palaniswami
Minister for Public Works,
Highways and Minor Ports