

CHAPTER 11

TRAFFIC & TRANSPORTATION

Transportation is considered as the main sector of economic growth and development of an area. Many growing cities face the challenges in transportation like inadequate road width, uncontrolled development along the road side which limits the opportunity of expansion of road, high growth of motor vehicles day by day, inadequate parking spaces etc.

This chapter analyzes the details of available means of transportation such as road, railway, waterway and airways in the planning area and describes its present network, potentials and problems.

11.1 ANALYSIS OF EXISTING STATUS

11.1.1 ROAD NETWORK

Even though there are a large number of roads connecting places within the city and outer areas, the existing road network within the Municipal Corporation area has no well-defined pattern. National Highway No. 66 is the major road passing through the core area from south to north direction and other roads deviate from NH 66 in the east

and west directions. As the Arabian Sea forms the western boundary of the planning area, the roads leading in the western direction lead to places within the city including many beaches while the roads in the eastern direction connect major settlements outside the planning area.

The roads connecting the Corporation area to outside could be defined as ring road and there are seven such major roads in the planning area. They are Kannur-Thalasserry road (NH 66), Thazhe Chovva to Koothuparamba road (SH 38), Thazhe Chovva to Anjarakandy road, Kannur - Mattannur road, Kakkad-Pullooppi road, Kannur-Thaliparamba road (NH 66) and Alavil - Azheekkode road.

Apart from these major roads, there are many minor roads leading to places outside the Municipal Corporation area. All the radial roads are linked by minor roads and they do not have any definite pattern. The city roads are maintained by both PWD and the Municipal Corporation.

Existing road network in the Corporation area is shown in Figure.11.1 and reveals that the road



Figure.11.1 Existing road network in the Corporation area

network is of concentric pattern with two circular roads. The first circular road originating from Gandhi Square on NH 66 passes through Kannur Railway Station, Muneeswaran Kovil Junction and terminates at Gandhi Square. The second concentric road originates from Station Road, passes through New Bus Stand Junction, SBI Junction, Prabhat Junction and Girls High School Junction and terminates at Muneeswaran Kovil Junction. These two concentric roads are linked by a radial road from Plaza Junction to City Junction via District Hospital

which connects Arakkal Museum and St. Angelo Fort. The Cantonment area is connected to the city centre by this road. Payyambalam beach, major tourist centre in the city is also connected to this circular road.

Categorization of roads and footpaths based on the material used, as obtained from Vikasana Report, 2017 - 2022 is illustrated in Table.11.1 and Table.11.2 respectively. As per the tables, majority of roads in Kannur City are tarred (507.632 km) followed by earthen (166.965 km) and metal road (25.386 km).

Table.11.1 Categorization of roads based on the material used

| Sl. No. | Type of roads | Length (km) | | | |
|--------------------------|---------------|----------------|--------------------|----------------|----------------|
| | | Width up to 3m | Width from 3m - 6m | Width above 6m | Total |
| 1 | Earthen Road | 32.193 | 134.264 | 0.508 | 166.965 |
| 2 | Metal Road | 19.388 | 5.898 | 0.1 | 25.386 |
| 3 | Tar Road | 49.612 | 385.055 | 72.965 | 507.632 |
| 4 | Concrete Road | 3.757 | 2.141 | 0 | 5.898 |
| Total Length (km) | | | | | 705.881 |

Source: Vikasana Report, 2017-2022

Table.11.2 Categorization of footpaths based on the material

| Sl. No. | Type of footpath | Length (km) | | |
|--------------------------|---------------------|----------------|--------------------|----------------|
| | | Width up to 3m | Width from 3m - 6m | Total |
| 1 | Concrete Footpath | 76.897 | 1.567 | 78.464 |
| 2 | Inter lock Footpath | 0 | 0.12 | 0.12 |
| 3 | Footpath | 49.605 | 0 | 49.605 |
| Total Length (km) | | | | 128.189 |

Source: Vikasana Report, 2017-2022

The Vikasana Report 2017 - 2022 also reveals that the total length of tarred roads need to be renovated is 262.935 km and that of earthen road is 16.73 km. The length of metal roads need to be renovated is 3.78 km. The lengths of new tarred and earthen roads need to be constructed are 92.228 km and 103.66 km respectively.

11.1.2 VEHICLE POPULATION

Growth trend: The trend in vehicular growth has been phenomenal all over

the State and Kannur is no exception to this. The growth of motor vehicles in Kannur district during the period from 2005 to 2015 is given in Table.11.3. It can be seen that the vehicle population in Kannur district has grown by more than three times during the last ten years.

No. of vehicles in 2015 in Kannur District: The number of motor vehicles having valid registration in Kannur district and Kerala State in 2015 is given in Table.11.4.

Table.11.3 Growth of vehicle population in Kannur District

| Year | No. of Vehicles | Growth Index |
|------|-----------------|--------------|
| 2005 | 1,61,150 | 100.00 |
| 2006 | 1,85,061 | 114.84 |
| 2007 | 2,10,070 | 130.36 |
| 2008 | 2,32,737 | 144.42 |
| 2009 | 2,57,384 | 159.72 |
| 2010 | 2,86,993 | 178.09 |
| 2011 | 3,32,990 | 206.63 |
| 2012 | 3,82,680 | 237.47 |
| 2013 | 4,14,593 | 257.27 |
| 2014 | 4,64,885 | 288.48 |
| 2015 | 5,12,320 | 317.91 |

An analysis of the existing vehicle population shows that major share of nearly 47 per cent of the total vehicle population in the district continued to be two-wheelers, followed by 22 per cent of cars.

11.1.3 TRAFFIC VOLUME STUDIES

The peak hour traffic volume at major intersections is given in Table.11.5 and it is spatially represented in Figure.11.2. It could be seen that Thana Junction recorded the highest peak hour traffic volume of 5,102 PCU, Stadium Junction with 4,511 PCU, followed by Mele Chovva Junction with 3,997 PCU, Caltex with 3,865, South Bazaar Junction with 3,686 PCU and Gandhi square junction with 3,520 PCU in that order. Four intersections had traffic volume between 3,000 and 3,500 PCU, seven intersections between 2,000 and 3,000

Table.11.4 Number of motor vehicles having valid registration in Kannur district and State in 2015

| Sl. No | No. of Vehicles | Kannur District | Kerala |
|--------------|---------------------------------|-----------------|------------------|
| 1 | Four wheelers & above | 39,700 | 4,11,349 |
| 2 | Three wheelers including Tempos | 10,203 | 1,54,609 |
| 3 | Stages carriages | 2,142 | 31,286 |
| 4 | Contract Carriages / Omnibuses | 23,525 | 1,45,646 |
| 5 | Cars | 1,13,566 | 17,02,925 |
| 6 | Taxis | 15,920 | 2,14,216 |
| 7 | Jeeps | 5,346 | 73,700 |
| 8 | Auto rickshaws | 51,037 | 7,31,000 |
| 9 | Scooter/ Motor cycles | 2,42,881 | 58,28,817 |
| 10 | Tractors | 1,038 | 15,293 |
| 11 | Tillers | 330 | 5,414 |
| 12 | Trailors | 249 | 2,411 |
| 13 | Others | 6,383 | 1,04,579 |
| Total | | 5,12,320 | 94,21,245 |

PCU, ten intersections between 1,000 and 2,000 PCU and the remaining eight intersections had traffic below 1,000 PCU.

Table.11.5 Peak hour traffic volume at major intersections in the Corporation area

| Sl. No. | Name of intersection | No. of arms | Peak hour traffic (PCU) | Peak hour | | |
|---------|--|-------------|-------------------------|-----------|---|-------|
| | | | | | | |
| 1 | Thottada | 3 | 969 | 8.45 | - | 9.45 |
| 2 | JTS Junction | 3 | 944 | 11.30 | - | 12.30 |
| 3 | ThazheChovva Bypass | 4 | 3,135 | 8.30 | - | 9.30 |
| 4a | ThazheChovva (Mattannur road) | 3 | 3,110 | 12.00 | - | 13.00 |
| 4b | ThazheChovva (Thayyil road) | 3 | 2,993 | 12.00 | - | 13.00 |
| 5 | MeleChovva | 3 | 3,997 | 15.45 | - | 16.45 |
| 6 | Thana | 4 | 5,102 | 16.30 | - | 17.30 |
| 7 | Caltex | 3 | 3,865 | 9.15 | - | 10.15 |
| 8 | Gandhi Square | 4 | 3,520 | 9.30 | - | 10.30 |
| 9 | South Bazaar - Kakkad Rd Junction | 3 | 3,686 | 12.30 | - | 13.30 |
| 10 | AKG Junction | 3 | 3,404 | 12.30 | - | 13.30 |
| 11 | Pallikkunnu old P O | 4 | 2,981 | 17.00 | - | 18.00 |
| 12 | PodikunduMilma Junction | 4 | 2,442 | 12.30 | - | 13.30 |
| 13a | PuthiyaTheru (Kunhippally Rd) | 3 | 2,733 | 17.00 | - | 18.00 |
| 13b | PuthiyaTheru (Kattampally Rd) | 3 | 2,882 | 17.00 | - | 18.00 |
| 14 | Chala | 3 | 1,949 | 17.00 | - | 18.00 |
| 15a | Movancherry (Chala Rd Junction) | 3 | 668 | 8.45 | - | 9.45 |
| 16a | Mundayad (Kakkad Rd) | 3 | 1,799 | 17.30 | - | 18.30 |
| 16b | Mundayad (chelora Rd) | 3 | 1,771 | 17.30 | - | 18.30 |
| 17 | Vaaram | 3 | 1,382 | 8.30 | - | 9.30 |
| 18 | Valiyanloor | 3 | 1,620 | 9.15 | - | 10.15 |
| 19a | Echur (chelora Rd Junction) | 3 | 1,239 | 12.00 | - | 13.00 |
| 19b | Echur (Movancherry Rd Junction) | 3 | 1,266 | 12.00 | - | 13.00 |
| 20 | Korjan School Junction | 3 | 925 | 12.30 | - | 13.30 |
| 21 | Kakkad - Pallippuram Rd Junction | 3 | 993 | 12.30 | - | 13.30 |
| 22a | Kunhippally (Pallikkunnu Rd Junction) | 3 | 901 | 9.45 | - | 10.45 |
| 22b | Kunhippally (Kannadiparamba Rd Junction) | 3 | 887 | 9.45 | - | 10.45 |
| 23 | Kottali | 3 | 432 | 12.45 | - | 13.45 |
| 24 | Chalad | 4 | 1,641 | 16.45 | - | 17.45 |
| 25 | Plaza Junction | 3 | 2,830 | 9.30 | - | 10.30 |
| 26 | MuneeswaranKovil Junction | 3 | 3,113 | 12.00 | - | 13.00 |
| 27 | Stadium Junction | 4 | 4,511 | 9.30 | - | 10.30 |
| 28 | Prabhat Junction | 3 | 2,097 | 15.45 | - | 16.45 |

The traffic volume in the Municipal Corporation area is shown in Figure.11.3. It reveals that NH stretch

between Thazhe Chovva and Highway Junction carried traffic volume in the range of 2000 to 5000 PCU and the

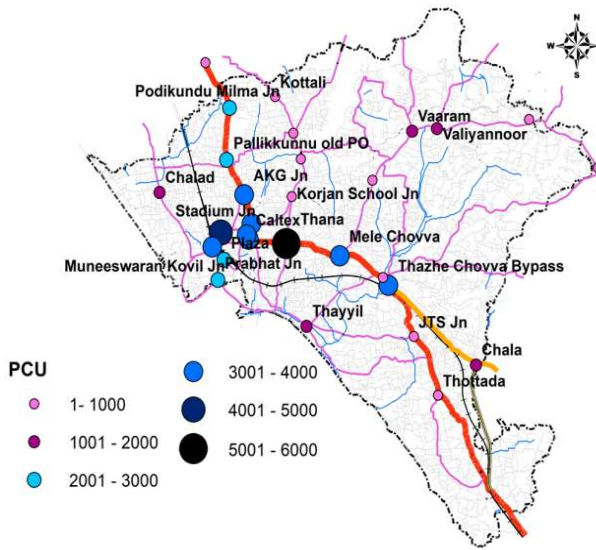


Figure.11.2 Peak hour traffic flow at major intersections in the Corporation area

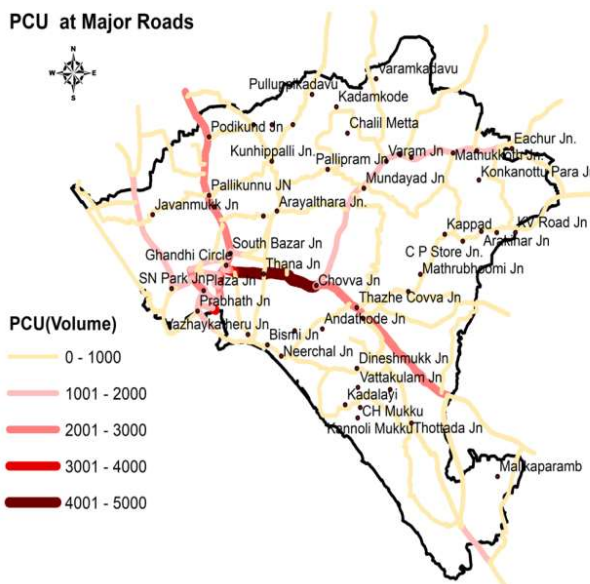


Figure.11.3 Traffic volume on major roads

highest volume is shown between Thana Junction and Manorama Junction. However, between Naadal Gate and Thazhe Chovva via Thottada, the traffic volume was below 1,000 PCU only. Within the CBD area of the city on the circular road from

and to Gandhi Circle via Railway Station, the traffic volume ranged between 1,000 and 4,000 PCU.

11.1.4 CAPACITY UTILIZATION

Capacity utilization of the road stretches is measured by volume-to-capacity ratio (V/C Ratio). It is the ratio of volume of traffic plying on the road stretch to the capacity of the road stretch. For working out the capacity of different road sections, the information compiled during the road inventory survey was compared with the specifications of IRC-106-1990 (Guidelines for capacity on urban roads). While working out the capacities, due consideration was given to carriage-way width, junctions, parking, lateral clearance, shoulder, surface condition etc.

The traffic volume observed at different road stretches were compared with the capacity of road sections, to calculate the volume-capacity ratio (V/C ratio) of different road sections within the planning area. Many road stretches within the Corporation area were over utilized to the extent of more than 1.5 to 2 times of their carrying capacity resulting in congestion, accidents and declining travel speed. The entire NH section between Thazhe Chovva and Puthiyatheru is over utilized to the extent of more than 1.5 times their present volume even though some of the stretches have four lane divided

carriageway. Koothuparamba road, Kattampally road, Thazhe Chovva - Mattannur road and Azheekkal road are also severely congested as reflected in the high V/C ratio.

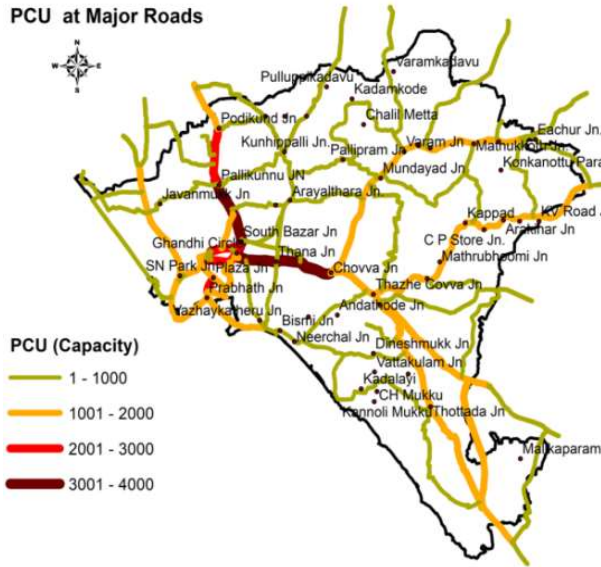


Figure.11.4 Capacity utilization of major roads

Within the planning area, most of the roads including the circular road from Gandhi Circle via Railway station are found to be congested with V/C ratio more than two in many stretches. Figure.11.4 exhibits the over utilized roads in Kannur City.

11.1.5 CHARACTERISICS OF INTERCITY PASSENGER AND VEHICULAR TRAFFIC

The O-D pattern of inter-city passenger traffic revealed that there were about 1.78 lakh internal-external

trips (Study region to outside study region), out of 4.30 lakh inter-city passenger trips. They constituted 42% of total trips. A total of 2.00 lakh trips were external - internal trips (outside study region to study region) constituting 46% of the total trips. External-external trips to the tune of 35,000 were performed through the study region and they were about 8% of the total trips. About 4% of the trips contribute to internal to internal movements. Pattern of inter-city passenger movements are shown in Figure.11.5.

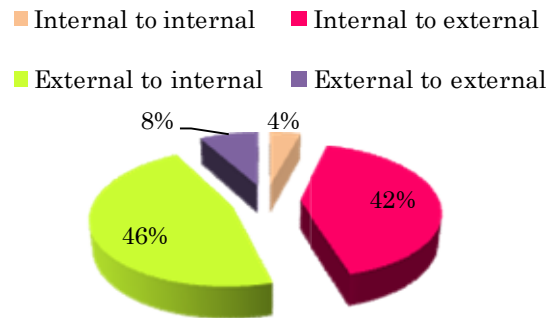


Figure.11.5 Distribution of Intercity Flow of Passenger movement

But in case of goods traffic movement, external to internal traffic constitutes 40%, internal to external traffic is 16%. The external to external traffic is about 44% as shown in Figure.11.6.

Distribution of intercity passengers as well as goods vehicles according to

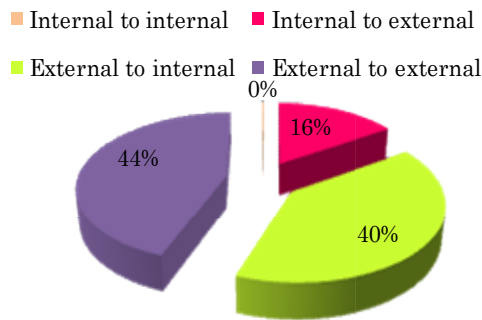


Figure.11.6 Distribution of intercity flow of goods traffic movement

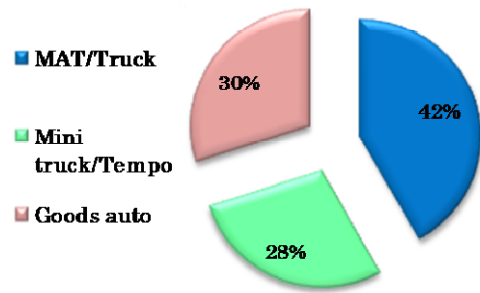


Figure.11.8 Distribution of Intercity Flow of goods vehicles based on mode of travel

the mode of travel is shown in Figure.11.7 and Figure.11.8 respectively. Almost 58% of the passengers depend on bus and 21% depends on mini bus/car and 13% depends on two-wheelers. Moreover, it is seen that 8% depends on auto rickshaw for travelling purpose. In the case of goods vehicles, about 42% depends on MAT/truck while 30% depends on goods auto. About 28% depends on mini truck/tempo for transportation.

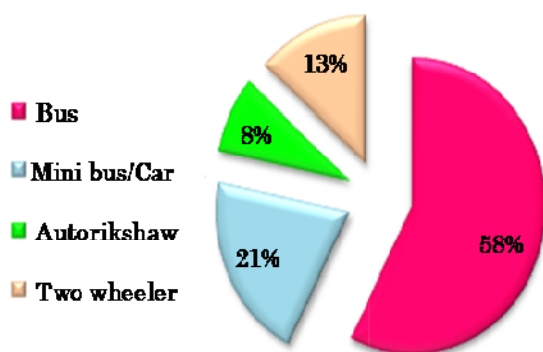


Figure.11.7 Distribution of Intercity Flow of passengers based on mode of travel

The distribution of purpose wise trips made by vehicles is shown in Figure.11.9.

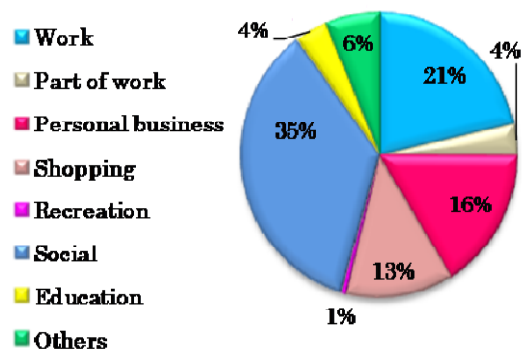


Figure.11.9 Distribution of purpose wise trips made by vehicles

It reveals that 35% of the trips were for social purpose. About 25% were work oriented followed by personal business and shopping purposes. The educational trips contribute about 4% of the total trips.

Figure.11.10 shows the commodity wise distribution of intercity goods traffic in Kannur City. The analysis of commodities carried indicated that construction materials was the largest commodity carried by goods vehicles contributing a major share of 51%, a trend seen in most of the urban areas in the state, followed by agricultural products (19%) and industrial goods (12%).

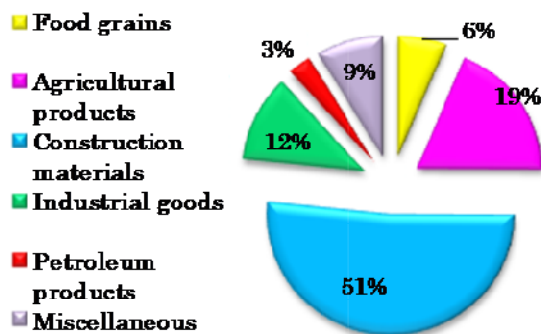


Figure.11.10 Commodity wise distribution of goods traffic in the planning area

11.1.6 CHARACTERISTICS OF PUBLIC TRANSPORT

TRANSPORT

Public transport services are met by both KSRTC and private buses in the Corporation area. KSRTC Bus stand at Caltex by the side of NH 66, Hospital bus stand, Old bus stand near Stadium and New bus stand at

Thavakkara are the four bus stations in Kannur. The KSRTC services are operated from KSRTC bus stand; private buses are operated from Hospital bus stand as well as New bus stand. All the city services of KSRTC buses touch both New and Old bus stands. Similarly, most of the private buses touch the Old bus stand.

In the planning area, more than 1,100 buses are operated from/through various bus stations with about 3,500 trips per day. The highest number of buses is operated from Thavakkara bus stand, followed by Hospital Bus stand and KSRTC station. Maximum number of trips are operated towards Thaliparamba/Kattampally direction (1,200 trips), followed by 678 trips towards Mattannur direction via both Echur and Movancherry, 472 trips towards Thalasserry direction and 357 trips towards Koothuparamba direction via Chala. Bus transport routes in the Corporation area are marked in Figure.11.11.

Apart from buses, Intermediate Public Transport (IPT) modes which consist of auto rikshaws and taxis are the other major public transport modes in the city. There are 28 auto stands and 14 taxi stands located within the Municipal limit of study area. Apart from the above, one prepaid auto stand and a taxi stand are located within the railway station area.

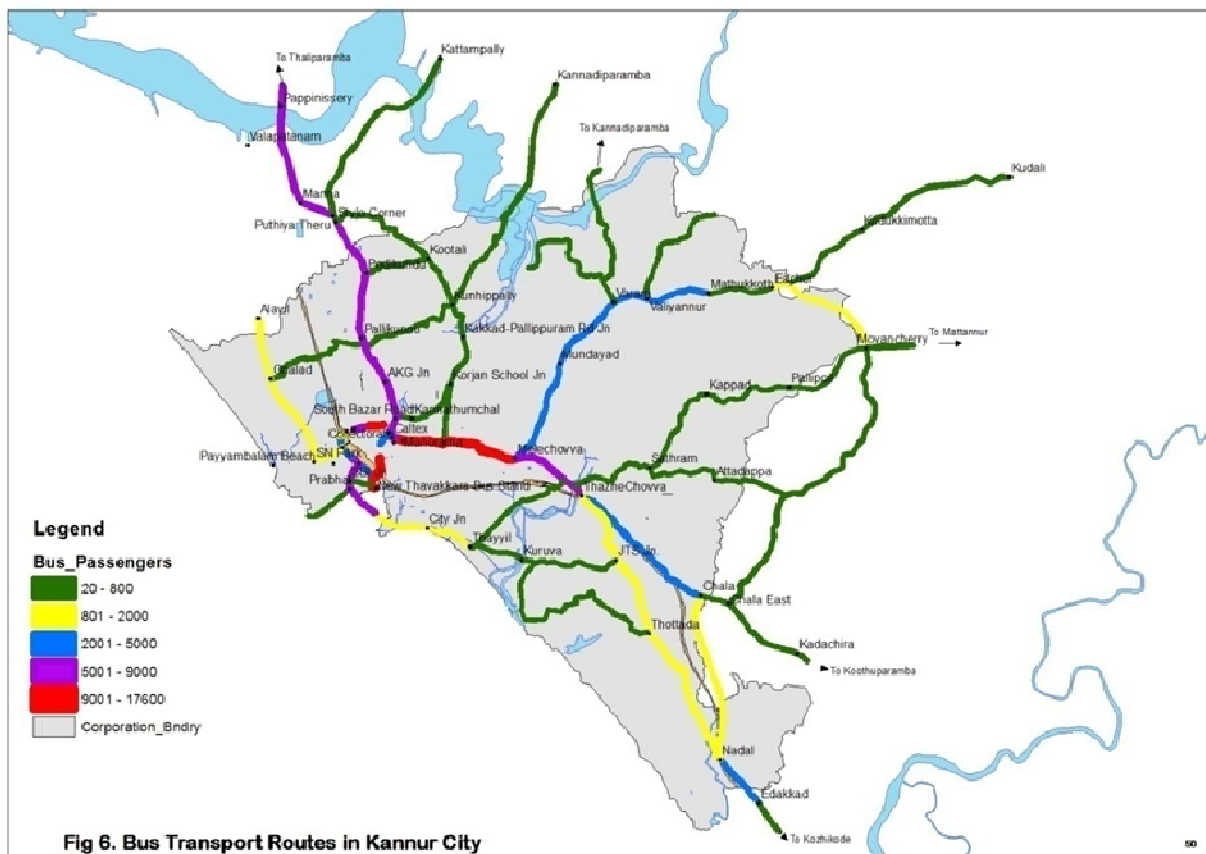


Figure.11.11 Bus transport routes in Kannur Corporation area

11.1.7 SPEED AND DELAY CHARACTERISTICS

To assess the average journey speed during peak hours, speed and delay survey was conducted along major roads. The journey speed in NH-66 from Edakkad Town to High Way Junction was found to vary between 12 and 37 km/hr. There were delay of more than 20% of travel time due to closure of railway gates at two places and traffic congestion at other places. The travel speed was found to be reasonably high on NH bypass which did not have major disturbances all along. Similarly on other roads leading to outside the planning area, relatively

high level of speed was witnessed.

Within the CBD area of the city, the travel speed was found to be quite low with less than 12 km/hr observed between Plaza and Railway station, followed by 14 km/hr between Railway Station and Muneeswaran Kovil Junction. Overall, 24 km/hr was the average speed between Gandhi Circle and Gandhi Circle via Railway station and Stadium.

Other roads which witnessed lower speed were the stretch between Plaza Junction and Prabhat Junction with a speed ranging between 12 km/hr and 18 km/hr. It could be summarized that the average speed of travel in the

Corporation area is 30 km/hr with delay accounting for more than 7% of the total travel time. However, within

the CBD area, the average travel speed observed was 23 km/hr with delay of 5%.

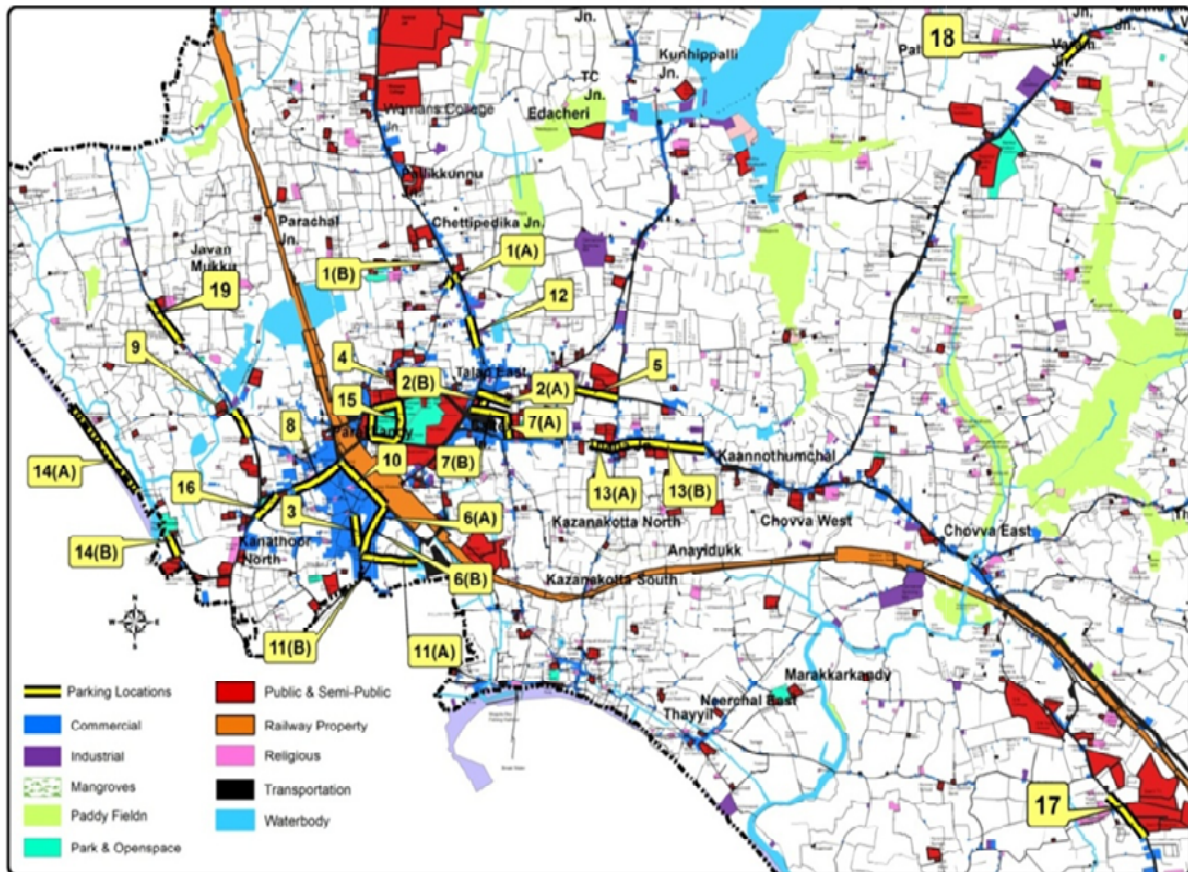


Figure.11.12 Parking locations in the planning area

11.1.8 PARKING FACILITIES

From the reconnaissance survey, it has been identified that most of the parking locations are concentrated within the core area. So the study will be more focused in this area even though other areas are also considered. The major areas of concern are: Plaza area, Gandhi Square, Thana Junction, Mele Chovva, Thazhe Chovva, Caltex, AKG Junction, Puthiyatheru and Chalad. The four

major stretches of the Corporation area having more number of parked vehicles are Thazhe Chovva to Chala, Mele Chovva to Thazhe Chovva, Varam to Valiyanoor and Plaza to Muneeswaran Kovil. The major freight routes are Thazhe Chovva to Chala, Pallikunnu to Podikundu and Plaza to Thavakkara.

Parking survey was carried out at all the major road stretches where the parking accumulations are found to be

high. The surveys were conducted for 6 hours of peak hours each day. The number plate method was used to collect data on parking duration and accumulation of all categories of vehicles on major parking corridors. In certain other locations, only parking accumulation of vehicles was observed. The locations selected for on street parking survey are shown in the Figure.11.12 and the details are given in Table.11.6.

City outskirts have less dense roads and most of the main roads have wide unpaved shoulder. So availability of on-street parking is more in those areas compared to the vehicle concentration and space availability of the core area, It is the main area that is affected by parking problems. (problems due to lack of parking space and due to parking at unauthorised spaces)

Table.11.6 On street Parking locations in Kannur Corporation area

| Sl. No | Location | Stretches |
|------------------------|----------------------------|---|
| City Core Areas | | |
| 1 | AKG Junction | A) AKG to Caltex. B) AKG to Madharao Hospital |
| 2 | Ashoka Hospital Area | A) NH to TATA Motor Finance B) Hospital to K M I Shopping Mall |
| 3 | Bank Road | |
| 4 | Corporation Office | Corporation to Chinmaya |
| 5 | Dhanalakshmi Hospital | Hospital Junction to Rd towards ABC Emporium |
| 6 | Fort Road | A) Plaza Jn to Indian Coffee House B) Indian Coffee House to SBI |
| 7 | K S R T C Stand | A) Sub registrar road B) Sannidhanam road |
| 8 | Kavitha Theatre Road | |
| 9 | Passport Office Road | Syndicate Bank to Beach Rd |
| 10 | Railway station Road | Plaza to MuneeshwaranKovil |
| 11 | Pvt. Bus Stand - Bank Road | A) Circle to Snehalayam Rd B) Snehalayam Rd to Bank Road |
| 12 | South Bazaar | |

| | | |
|---------------------------|--------------|------------------------------------|
| 13 | Thana | A) Sadhoo auditorium to Water tank |
| | | B) Water tank to Kannothumbal |
| Recreational Areas | | |
| 14 | Payyambalam | A) Beach Rd |
| | | B) Beach to Urusuline School |
| 15 | Stadium Area | |
| 16 | S N Park | |
| City Outskirts | | |
| 17 | Thottada | |
| 18 | Varam | |
| 19 | Chalad | |

By overlaying the major parking locations over land use of the area, it is observed that most of the parking locations are along commercial stretches and institutional buildings. This is due to lack of provision of required parking spaces for these shops and institutions. In the core area, parking is erratic and most of the drivers park wherever they find space.



Un authorized parking near Central Market

In market area, two-wheelers, parked in the major parking corridors are parked for duration of less than 30 minutes. A little more than 17% of the vehicles parked for a duration of 30 to 60 minutes. Only about 14% of the vehicles parked for more than one hour.

11.1.9 PEDESTRIAN MOVEMENTS

Pedestrian cross movements in the planning area are shown in Figure.11.13. From the figure, it is clear that pedestrian crossings are mainly observed at Gandhi Circle, followed by Puthiyatheru area with peak hour pedestrian cross movements of 4,428 and 4,352 respectively. Other important locations with considerable pedestrian movements are Caltex area (3,194), Thana (2,804) Stadium

Table.11.7 Parking duration of vehicles at major parking corridors in Kannur Corporation area

| Duration (Mints) | Vehicles | | | | | | | | | Percentage to total |
|------------------|----------|----------|--------------|------------|--------------|-----------|------------|------------|--------------|---------------------|
| | Bus | Mini bus | Car/Van/Jeep | Pass Auto | Two wheeler | Truck | Mini truck | Goods auto | Total (No.) | |
| < 30 | 2 | 1 | 516 | 198 | 682 | 4 | 32 | 46 | 1,481 | 69.14 |
| 30 - 60 | - | - | 131 | 41 | 173 | 10 | 5 | 7 | 367 | 17.13 |
| 60 - 90 | - | - | 44 | 8 | 65 | - | 3 | 5 | 125 | 5.84 |
| 90 - 120 | - | - | 23 | - | 25 | 1 | 1 | 3 | 53 | 2.47 |
| 120 - 150 | 1 | - | 14 | - | 10 | 1 | - | - | 26 | 1.21 |
| 150 - 180 | - | - | 12 | 1 | 16 | 2 | - | - | 31 | 1.45 |
| 180 - 210 | - | - | 3 | - | 9 | - | - | - | 12 | 0.56 |
| > 210 | - | - | 21 | - | 22 | 4 | - | - | 47 | 2.19 |
| Total | 3 | 1 | 764 | 248 | 1,002 | 22 | 41 | 61 | 2,142 | 100.00 |

The road section between Railway Station and Plaza had the highest pedestrian lateral movements of 1,546 during peak hour, followed by Stadium-Thalap road with 1,124 movements and Plaza to Prabhat with 1,108 movements.

Pedestrian vehicle conflicts are seen at major activity areas along NH. Especially Mele Chovva, Thana, Caltex, Gandhi Circle, Puthiyatheru are witnessing huge pedestrian conflicts necessitating suitable counter measures. Within the CBD area, Railway station area and Muneeswaran Kovil area are experiencing severe pedestrian vehicle conflicts warranting grade separated facilities.

11.1.10 ACCIDENT PRONE LOCATIONS

Accident data for the years namely 2013, 2014 and 2015 were collected from State Crime Records Bureau Thiruvananthapuram to assess the accident scenario in the planning area, locations of accidents and accident severity. Details of accidents reported according to accident severity during these years (2013, 2014 and 2015) are given in Table.11.8. It could be seen that 311 accidents were reported in the year 2013, which increased to 390 in 2015.

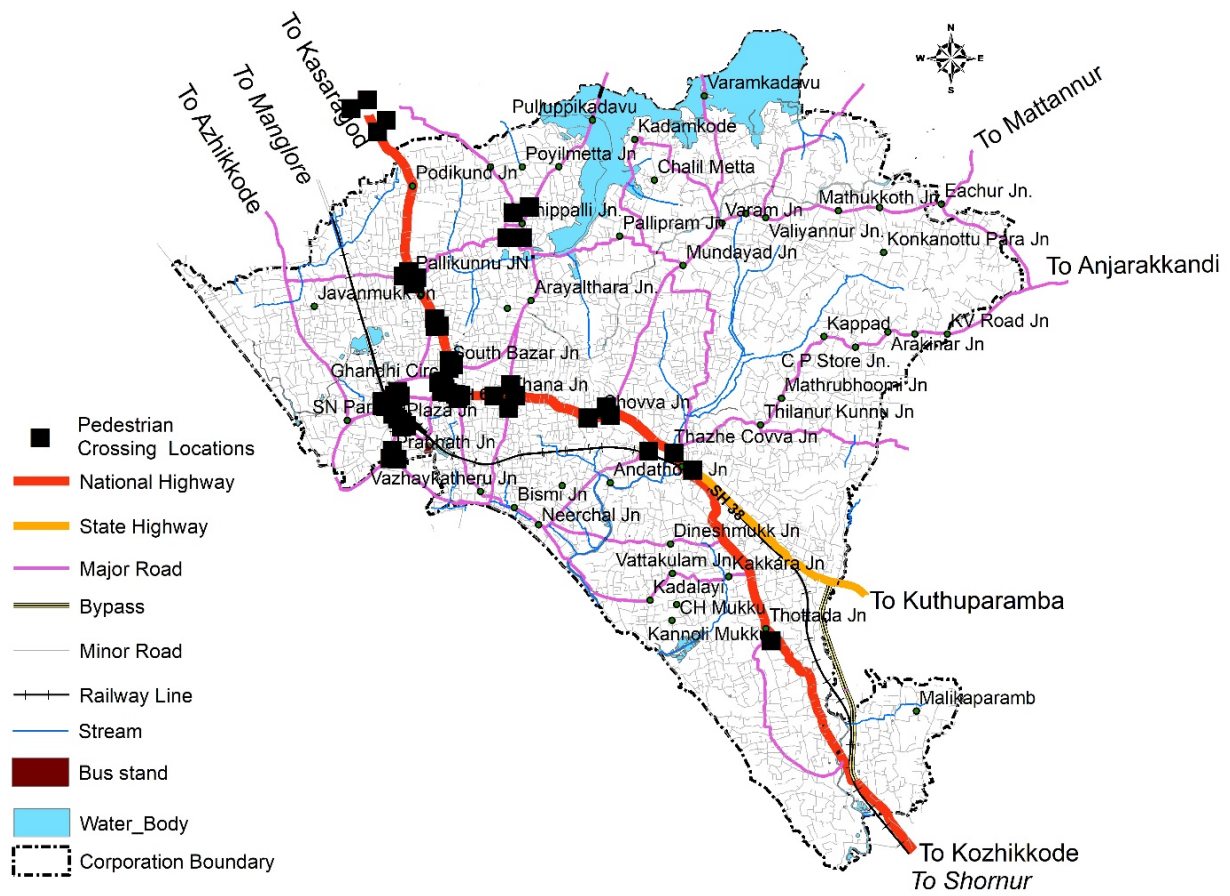


Figure.11.13 Pedestrian crossings in Kannur Corporation area

In the case of accident victims, the increase was from 434 to 561 during the same period. Most of the accidents were found to be simple ones (54%), followed by grievous ones in the year 2015. Fatalities were reported in the case of 9% of accidents.

Also, as per the data, major accident prone locations in the planning area are Thana area (38), Kannothumbal (36), Pallikkunnu (32), ThazheChovva (29), Chala (27) and MeleChovva (27) etc.

Table.11.8 Growth in accident in Kannur Corporation area

| Year | No. of Accidents | | | | No. of Casualties | | | |
|------|------------------|----------|--------|-------|-------------------|----------|--------|-------|
| | Fatal | Grievous | Simple | Total | Fatal | Grievous | Simple | Total |
| 2013 | 23 | 80 | 208 | 311 | 25 | 90 | 319 | 434 |
| 2014 | 33 | 97 | 187 | 317 | 34 | 119 | 302 | 455 |
| 2015 | 37 | 144 | 209 | 390 | 37 | 154 | 370 | 561 |

11.1.11 HIERARCHY OF TRAFFIC NODES

South Bazar and Camp Bazar area come under first order due to its prime location as they contain markets. Chovva, City, Thana and Thazhe Chovva come under second order. Thirteen third order and twelve fourth order nodes exist in the Municipal Corporation area. The hierarchy of traffic nodes in the planning area is shown in Figure.11.14.

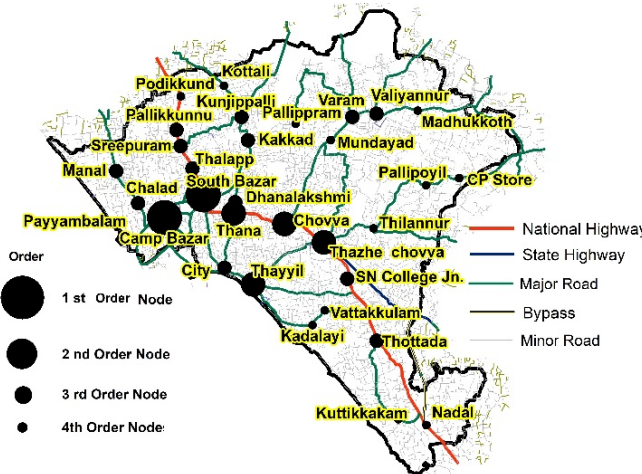


Figure.11.14 Hierarchy of traffic nodes

11.1.12 RAILWAY TRANSPORT

Kannur Corporation area is connected by a broad gauge railway line from Shoranur to Mangalore and then to Panavel via Konkan railway. The railway stations located within the planning area are Kannur and Kannur South. Kannur Railway Station is one of the major stations of the Southern Railway, under the jurisdiction of the Palakkad Division.

The existing rail network in the Corporation is shown in Figure.11.15. All trains including the Thiruvananthapuram Rajdhani Express and Kochuveli Garib Rath stop at Kannur. Six daily trains and around 15 weekly or bi-weekly trains connect Kannur to the capital Thiruvananthapuram.

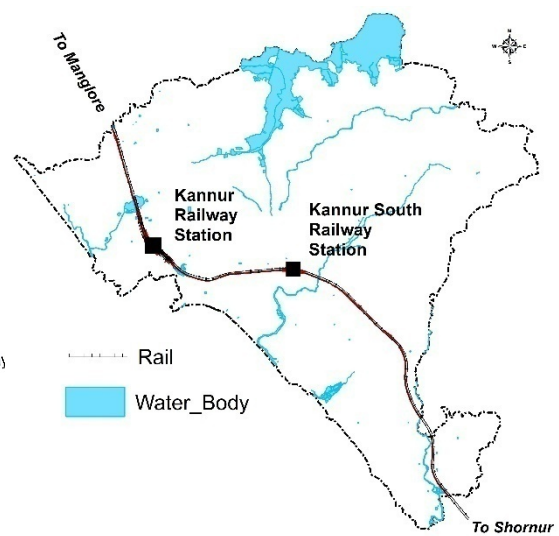


Figure.11.15 Existing rail network

11.1.13 WATER NETWORK

Kannur is an ancient Seaport. The nearest all-weather seaport is Mangaluru in Karnataka state. Azheekcode port lying outside the planning area has been included for developing coastal shipping by the Government of India under the National Maritime Development Programme (NMDP). The proposed stretch of West Coast Canal or National Waterway No. 3 from Beypore to Kasargod which is a

continuation of existing network through Kollam-Kottappuram-Beyyore is passing through the Corporation area and it is spatially shown in Figure.11.16. In Kannur district, it connects Mahe River with Kavvayi River.



Kannur International Airport (Mattannur)

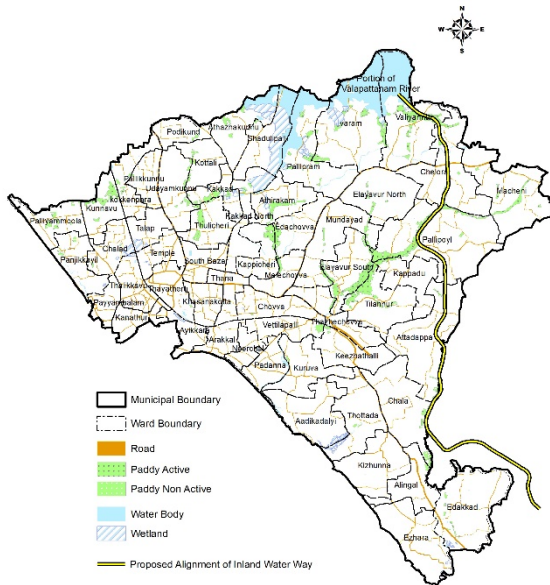


Figure.11.16 Proposed alignment of inland water way

11.2 DEVELOPMENT POTENTIALS AND PROBLEMS

Kannur Corporation area is a major transit centre which is well connected by road and rail. The planning area is blessed with good road connectivity. One national highway (NH 66) and one state highway (SH 38) pass through the city providing interstate as well as inter district connectivity and this offers great potential regarding transportation sector. The Kannur-Mattannur road is connects the Corporation area to Kannur International Airport. Kannur Railway Station, the major railway station in the district is located within the planning area. Kannur South Railway Station is also located in the Corporation area. Also, the proposed stretch of West Coast Canal or National Waterway No.3 from Beyyore to Kasargod is passing through the Municipal Corporation area. Thus, the existing system of transportation network will definitely promote trade and commercial activities of the city and will reflect in all production sectors.

11.1.14 AIRWAYS

Kannur International Airport is at Mattannur in Kannur District, 25 km east of the CBD of the planning area. It is the fourth international airport in Kerala. The airport has a 4,000 m runway (the longest in the state), art passenger terminal and other amenities. It is well connected by a comprehensive network of roads.

The planning area is served by public transport system consisting of both State owned Kerala State Road Transport Corporation (KSRTC) and private buses. A well developed new Bus stand with spacious amenities for parking and other facilities functions at Thavakkara for providing the inter - regional services. All buses except City services are operated from here. Apart from these, the bus stand near the Govt. Headquarters Hospital provides facility for intra - regional services.

Like any urban centre in the state, Kannur Corporation area also faces problems in Traffic and Transportation system. Poor surface conditions, increasing number of personalized vehicles, inadequate width of roads in the central part of the city, heavy movement of vehicular and pedestrian traffic, lack of adequate pedestrian facilities, lack of proper parking lots which leads to unorganized street parking, movement of inter-city bus traffic on congested urban roads due to the location of intercity bus stands within the central area of the city, encroachment of right-of-way, lack of bus bays, bottlenecks due to level crossings, absence of proper traffic signs and markings are other issues faced in the planning area. Also, due to the lack of proper drainage facilities, water logging is identified in certain low lying areas.

The old bus stand and KSRTC stand have poor infrastructure facilities like dilapidated roads, lack of

comfort stations, rest rooms etc. Water logging is also seen in these areas. Due to the lack of truck terminals and parking facilities, the markets are facing traffic congestion. The stretch of NH 66, Kannur to Mattannur road, Gandhi circle to Railway station stretch etc. are highly congested as the V/C ratio at these areas are above 1. Hence essential development plans and techniques are needed for the smooth flow of traffic in future.

11.3 INFERENCE

Being the district headquarters and important trade, commerce and tourist centre of Kannur District, the administrative needs of the entire population of Kannur district are to be met by the infrastructure of Kannur Corporation area. This should be the important parameter in its planning. The traffic and transportation sector has great significance in the development of the city as it can promote all other production sectors by providing smooth accessibility and connectivity. The improvement and maintenance of existing roads and the construction of new roads will enhance the trade and commercial activities, tourism, industries, education, health, etc. of the planning area.

Traffic congestion is observed along the stretches of NH 66, from Kannur to Mattannur road and from Gandhi circle to Railway station which can be controlled by introducing traffic

control/signal system as well as widened roads. The water logging issues in the Corporation area can be solved by the introduction of scientific drainage system. The introduction of parking as well as pedestrian crossing facilities within the planning area is essential to cater to the future traffic. There are footpaths in almost all major roads, but pedestrian crossings are not arranged properly. The goods traffic in the market centres is the most neglected one. Insufficient loading and unloading facilities,

terminal facilities, provision for taxi stand, truck terminal, organised parking centres or plazas, connectivity of missing links and proper circulation pattern for the traffic are the important needs of the city. The existing Railway station which is the important one in the district, the high potential of Kannur International Airport, proposed inland water network all together will promote trade and commercial activities of the city and this in turn will get reflected in all production sectors.

