

## CHAPTER 29

# TRAFFIC & TRANSPORTATION PLAN

*In Kannur city, road network system is the major mode of transportation facility available for the people. The existing road network system has a radial-ring road pattern. The roads connecting the city Corporation area to outside can be defined as radial roads and there are seven such major roads in the Kannur Corporation area. They are Kannur-Thalassery 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 - Azheekode road. While the two Coastal roads, ie Kannur HQ Hospital - Thayyil - Kizhunna - Nadalroad and Kannur-Payyambalam-Palliyanmoola road can also be considered as radial roads sprading to south and north directions respectively.*

*There are so many cross roads or link roads connecting all these radial roads at major nodes. These cross roads when linked with others can form the so called ring roads around the city core area. The radial roads and the so formed ring roads together*

*thus constitute web network pattern of radial-ring roads.*

*Apart from this, rail is another important mode of transportation in the plan area. Kannur Railway station, which is one of the major stations of the Southern Railway, under the jurisdiction of the Palakkad Division is located in the city corporation of Kannur town. Kannur International Airport is located at Mattannur in Kannur District. It is 25km east of Kannur city. It is the fourth international airport in Kerala. The proposed inland water transport network is passing through the eastern portion of plan area. The Azheekal Port located at just 12kms away from Kannur city also connects with water transport facility.*

### 29.1 TRANSPORT DEVELOPMENT PLAN FOR KANNUR CORPORATION

Transport Development Plan for Kannur city is prepared taking into account the existing traffic scenario and based on an evaluation of the future traffic projected on the base year network. Transport development

schemes cover all the available modes of travel and are formulated so as to reduce the severe strain put on the existing road network. All committed development schemes were taken into account while formulating the Transport Development Plan.

As per traffic and transportation plan prepared by NATPAC, almost all the major road corridors in the region would be severely congested in the horizon year with the anticipated traffic more than the capacity of the roads leading to **"do-nothing option"**. The capacity utilization of major corridors of NH 66 has far exceeded their carrying capacity in the base year itself. It could be seen that these sections in the Highway will be severely affected in the horizon years. Similarly, inner ring road of Kannur city connecting Caltex Junction, Civil Station, Police Club Jn, Thavakkara Jn, Plaza Jn, Railway Station, Muneeswaran Kovil Jn, and Stadium will be the worst affected network by the year 2036. Important collector and sub arterial roads in the city are also exceeding their capacity gradually focusing attention for further strengthening and widening. The projected traffic on the existing road network implies that the existing road network would not be able to handle the traffic in the horizon years without up gradation of the transport infrastructure facilities. Augmentation of the capacity of the existing road network by strengthening/widening

and the construction of missing links, flyovers, bypasses and link roads is a must considering the dramatic increase in the traffic volume.

As like any urban city in the state, Kannur city also faces the following problems in Traffic and Transportation system. The major traffic and transportation problems being faced by the plan area are:

- Inter-mixing of intra-city and inter-city traffic in the absence of adequate bypasses
- 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
- Unorganized on-street parking in the absence of proper parking lots
- 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
- Bottlenecks due to level crossings
- Absence of proper traffic signs and markings

Being the district headquarters and an important regional centre for trade, commerce and tourism in Kannur District, the administrative needs of the entire population of Kannur district are to be met by infrastructure of the study area, which should be an important parameter in its planning. Regional connectivity has a major role to play in ensuring the bond between the district headquarters and other parts of the District. Since the most important problem of the plan area is the insufficient width of NH 66 and inadequacy of the internal ring roads to cater to the high volume of traffic, the development strategy should address the issues of traffic congestion comprehensively and adopt adequate capacity augmentation schemes so that frequent and regular traffic hold-ups are minimized.

Apart from this, the impact of Kannur Airport and Azheekkal Sea port should be addressed in terms of connectivity to the airport and sea port respectively.

Also at present, very few grade separated facilities are available to cross the railway line and they too are of inadequate width necessitating widening or construction of new ROB or underpasses. There is a need for construction of more ROB's to ensure uninterrupted flow of traffic between the eastern and western parts of the Kannur Municipal Corporation. Focus shall be given for parking and

pedestrian activities along with smooth operation of traffic flow in the plan area. And special emphasis should also be given to develop off-street parking lots and also to provide adequate pedestrian facilities in the central business area of the city.

## 29.2 TRANSPORTATION PLAN

As already revealed from the existing road network pattern, a radial-ring road web pattern is suggested for the transportation plan with major arterial roads radiating from the city and connected with cross roads forming as ring roads.

The existing road network in the city are mainly linked through NH 66, SH 38, Kannur-Mattannur road, Kakkad-Pullooppikadav road, ThazheChovva-Anjarakandy road and Kannur-Alavil-Azheekkode road and most of the vehicles have to pass through these major roads to reach different places in the city.

Three ring roads are proposed in the plan area with inner ring road at core city centre, one through middle portion, and the third one through outskirts portions of the city as far as possible. Thus, for ensuring smooth circulation and mobility within the city, road widening proposals are given below and are shown in the Transportation Plan (Figure.29.1).

### 29.3 ROAD WIDENING PROPOSALS

The Volume/Capacity ratio study reveals that traffic volume passing through the major roads has already exceeded their capacity and it will be increasing by the horizon year except for a few minor roads. Therefore, road widening is essential for getting a smooth transit without congestion and traffic blocks. Widening proposals of the major roads in the city are illustrated in Table.29.1. Name of roads having proposals, for widening their length and existing width are given in table and proposed width is marked correspondingly in Figure.29.1.

#### 29.3.1 MAJOR ROADS IN THE CITY

##### 1. National Highway (NH 66)

NH 66 (Kanyakumari-Panavel Highway) is the major arterial corridor passing through the centre of the city along north-south direction and it is the central axis or backbone of the study area around which the entire road networks will revolve around. NH-66 connects the study area with other major cities like Kozhikode, Kochi and Thiruvananthapuram in the south, while it connects to Kasaragod town and cities like Mangalore, Goa, Pune and Mumbai in the north direction. Since major parts of the NH66 is over utilised in the base year itself, a 24m widening is proposed for

its entire length within the study area. Thus, two Railway Over bridges (ROBs) at Nadal and Thazhe Chovva need to be constructed as part of widening NH 66.

##### 2. State Highway (SH-38)

SH 38, a major road in Kannur District, originates from NH-66 at Thazhe Chovva, and finally reaches to Puthiyangadi, in Kozhikode District connecting settlements like Chala, Koothuparamba, Kuttiyadi etc. Since this road has the same alignment of the proposed NH Bypass near Chalakkunnu and Kezhthally area, it is necessary to widen to 45m, the proposed width of NH bypass.

##### 3. Kannur-Mattannur road

Kannur-Mattannur road is also known as airport road which connects the city to Kannur International Airport at Mattannur. It starts from Melechovva and passing through Varam, Eachur, Koodali, Chalode finally meets to Thalassery-Coorg (SH 30) at Mattannur town. The proposed NH bypass crosses this road near Mundayad Indoor Stadium, and therefore has to carry traffic to and from bypass road. The traffic volume had already exceeded the capacity of this road. And also there exists a proposal for upgrading this road to NH status. Considering all these things, a 32m widening is proposed here.

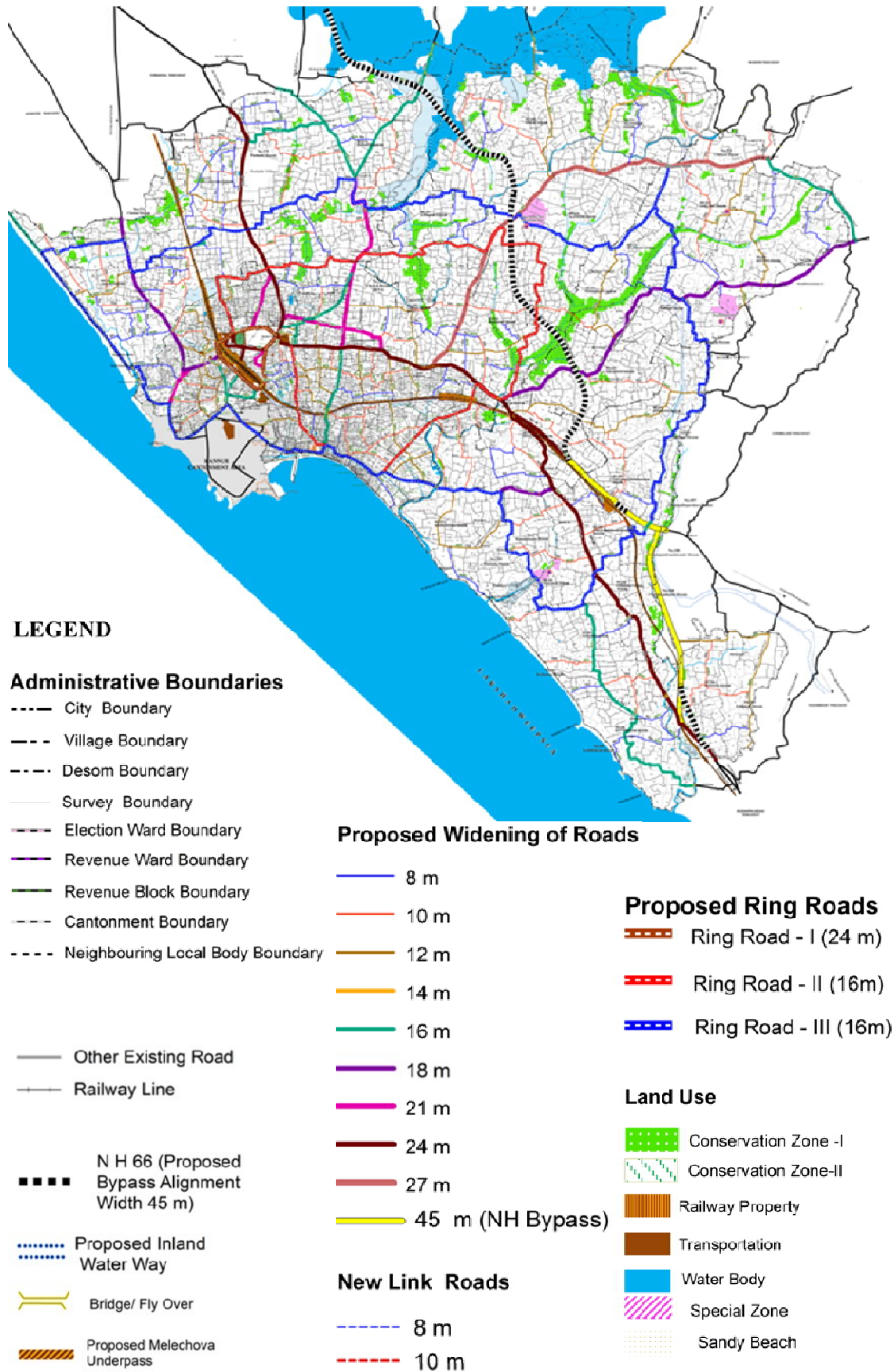


Figure 29. 1 Transportation Plan

Table 29. 1 Widening proposals for the major roads in the city

Sl. No.	Road Name	Existing Average Width (m)	Length (km)
<b>Proposed Width - 45m</b>			
1	NH-66 Bypass	15	7.966
2	SH 38	10	4.002
<b>Proposed Width - 27 m</b>			
3	Mele Chovva - Mattannur Road	13	7.246
<b>Proposed Width - 24m</b>			
4	N.H66	15	14.825
5	SH 38	10	1.167
6	BSNL - Old Busstand Road	10	0.205
7	Ring Road 1	18	3.060
8	Police Club Officers Road	15	0.721
9	Railway Station Road	13	0.200
<b>Proposed Width - 21m</b>			
10	Ashirvadh Jn - Police Club Road	8	0.453
11	Pamban Madhavan Road	15	0.939
12	South Bazar - Kannothumbal Road	8	1.009
13	Thana Jn -Kakkad- Kunjipalli Jn Road	10	3.084
14	MTM School Road	12	0.441
<b>Proposed Width - 18m</b>			
15	Azhikode Road	8	3.336
16	HQ Hospital-Thayyil-JTS Road	9	0.897
17	Thazhechovva - Anjarakkandy Road	9	5.600
<b>Proposed Width - 16m</b>			
18	Ashoka Hospital - Chenoli Jn Road	8	0.429
19	Bank Road	6	0.515
20	Echur Jn - Thazhe Mowwanchery Road	10	0.892
21	Fort Road	5	0.542
22	Kunjipalli - Pullupi Road	10	2.596
23	Kunjipalli Jn -Kottali- Puthiyatheru Road	10	1.574
24	Mahathmagandhi Road	12	0.560
25	Podikund - Kottali Road	6	1.461
26	Ring Road 2	14	38.897

27	Ring Road 3	14	11.570
28	South Bazar - Kunjipalli Road	10	1.132
29	Sub Registrar Office Road	8	0.384
30	Thana - Anayiduk Road	8	1.622
31	Thottada - Kizhunna - Kuttikakam Road	7	5.092
<b>Proposed Width - 14m</b>			
32	Valiyannur - Nayatupara Road	10	2.290
<b>Proposed Width - 12m</b>			
33	Agriculture Office Road - Peringoothambalam Road	4	1.403
34	Ambika Road	5	1.620
35	Anjukandy Road	6	0.944 Cantonment Road length - 0.4445
36	Attadappa - Thankekunnu Road	6	3.702
37	Beach Road (2)	4	0.176
38	Othayothe Road	4	0.378
39	Echur - Pallipoyil (NABARD) Road	7	2.773
40	Edakkad - Kadachira Road	8	2.000
41	Forest Office Road	7	0.574
42	Gopal Streat Road	3	0.469
43	Govt LPS Thayetheru - Kazanakotta Road	5	0.168
44	Haji Road	4	0.171
45	Kallikodan kavu - Food craft institute Road	3	0.138
46	Kanampuzha Branch Road	5	0.755
47	Kaniyatachan - Punnackachamoola Road	4	0.565
48	Kazanakotta Road	6	1.054
49	Koshomoola Road	6	1.275
50	Kurva Road - ESI Hospital Road	8	2.204
51	KWA - Manyakiyakavu Road	4	0.783
52	Thachambrath Road	6	0.617
53	MA Road	5	0.426
54	Manal-Dharamashastra temple - Palliyanmoola Road	4	1.088
55	Manprama Jn- DIS School Road	4	1.584
56	Marakkarkandy - Kuruvapalam Road	5	0.651

57	Marakkarkandy jn - Kannurkkara Busstop Road	6	0.837
58	Mother Child Hospital Road	8	0.181
59	Mariamman Kovil Road	4	0.233
60	Valiyavalappu Kannur Road	4	0.764
61	Olacheri Kavuv Road	6	0.524
62	Onden Road	4	0.953
63	Pallipoyil Chembiload Road	5	0.324
64	Parakandy Road	4	0.276
65	Peringalayi LP School - Mathrubhoomi Jn Road	7	1.987
66	Sadhoo Company Road	5	2.024
67	Sannidhanam Road	10	0.265
68	Thalikkavu - Manjapalam Road	5	0.957
69	Thalikkavu Road	5	0.665
70	Thana - Ayurveda Hospital Road	3	0.571
71	TK Jn - Anayiduk Road	4	0.925
72	Varam- Kannadiparamb Road	8	2.618
<b>Proposed Width - 10m</b>			
73	SC Hostel Manikkakavu Road	4	0.424
74	Victory Mill Kuruva Bridge Road	4	1.232
75	AKG Nagar Housing Colony Road	4	0.474
76	AKG Road	4	0.556
77	Asharikavu Road	3	0.861
78	Athazhakunnu - Kallukettchira Road	5	1.246
79	Attadappa Road- Sree krishna Temple Road	5	2.080
80	Arat Road	5	0.249
81	Azad Road	4	0.575
82	Beach Road (3)	5	0.562
83	Bismi Jn - Kouser Model EM School	5	0.648
84	Canal - Vayanashala Road	4	0.986
85	Chettipeedika- Spinning Road	4	1.069
86	Chinmaya Vidyalaya Road	6	1.479
87	District Ayurvedha Hospital Road	3	0.330
88	Ems Road - Pazhassi Canal Road	3	0.641
89	Forest Office - Lokhnath weavers Road	3	0.310
90	Forest Office - Salafi School Road	4	0.441



91	Ghokale Road	4	0.367
92	GHSS Thottada Road	4	2.059
93	Indira Priyadarshini Road	4	0.637
94	Irattakannanpalam Road - Al Rahma Masjidh Road	4	0.030
95	IRPC Road	5	0.431
96	ITI - Thoniyotukavu-Vattakulam Road	7	1.101
97	Jayanthi Road	4	1.498
98	Janakiya -Thazhay Chovva Road	5	0.240
99	Kannukkara Govt LP School Road	3	0.621
100	Kannothumbal - Kannurkara Road	4.4	0.322
101	Kasaanam Kotta Road	5	0.262
102	Kanathoor Temple Road	4	1.283
103	Kodapparamba Njaaluvayal Junction-Sree Poothatta Tharavad Vayanaattu Kulavan Kavuv Road	3	1.021
104	Kokkenpara Road	4	1.017
105	Kottali Edacheri Vayal Podikkund Road	6	0.877
106	Kunjipalli - Shadhulipalli Road	5	1.782
107	Kuttikakam CoOp Bank - Old Block Office Road	4	0.988
108	Manal-Dharamashastra temple - Palliyannmoola Road	5	1.922
109	Mandappan Kathivannoor Kavuv - Rehabilitation & Spiritual Revive Centre Road	7	1.574
110	Mathukkoth- Arakkinal Road	4	1.919
111	Ottamavu - City Road	5	1.399
112	Old Block Office - Kuttikakam Theruvu Mandapam Road	4	0.566
113	Oorpazhassikavuv Madappura Road	4	0.776
114	Padannapalam Sree Kunnath Bagavathi Temple Road	4	0.919
115	Parakandy Road	4	0.520
116	Passport Office -Parakandy Road	4	0.510
117	Poothatta Sukumaran Road	4	0.929
118	Post office Road	4	0.440
119	JS Paul junction-Gopal Street Road	7	0.717
120	Sanjay- Ottapidika Road	4	0.829
121	Sathram - Attadappa Road	5	1.531

122	SN College Road	6	1.071
123	Spinnig Mill - Bund Bridge Road	5	0.506
124	St.Michles - Onden Road	4	0.325
125	Thilleri Road	6	0.622
126	Thottada PHC - Kanoth Kavu Road	4	1.063
127	Uruvachal Jn - Kuruva Road	5	1.430
128	Valiyavalappukavu - Caltex Jn Road	4	0.461
129	V P Mahmaad Haji Road	3	1.144
130	Vaidhyarpeedika Jn - Changad Aroodam Baghavathi Temple Road	4	2.260
131	Varam Temple Road	7	3.838
132	Valiyannur- Nayattupara Road	5	1.295
<b>Proposed Width - 8m</b>			
133	AK Balan Master Road	6	0.570
134	Ambadi Road	5	0.555
135	Ambika - Sreepuram Nursery School Road	4	0.471
136	Amritha Vidyalayam Road	4	1.025
137	Arakinar Jn - Kappadu Mathukoth Road	5	1.017
138	Azhikodan Road	4	0.423
139	Baanu Road	5	0.298
140	Red Cross Road	5	0.509
141	SN Park-Irivery Kovil-Beach Road	4	0.831
142	Canal Road	5	0.960
143	Chalad - Bhaghavathi Temole Road	4	1.243
144	Chalad - Jayanthi Road	3	0.379
145	Dinesh Road	4	0.656
146	Durga Road	3	0.490
147	DVSS Road	4	0.423
148	Ezhara Harbour Road	4	0.601
149	Elayavoor-Village Office Road	4	1.024
150	Guha Kshethram Road	3	0.532
151	Haridas Lane Road	4	0.302
152	Iqbal Road	4	0.417
153	IRPC Road	6	0.380
154	ITI Road	5	0.728
155	Jai Javan Road	5	1.058

156	Jhonmill Road	4	1.213
157	Kadamkode - Chalilmetta Road	4	0.546
158	Kadanpeedika - Kottiyath Motta Road	4	0.446
159	Kadayath Madappura Road	3	0.553
160	Kotakai Water Tank Road	4	0.345
161	Kottakkan Road	3	0.233
162	Kottali Samskarika Nilayam Road	5	0.832
163	Kuruva - Knjira Road	6	1.801
164	Macheri Road	3	1.539
165	Mahathma Road	5	0.582
166	Maidhanipalli Road	7	0.731
167	Maniyattampara Road	4	0.756
168	Manden Gulikan Temple Road	4	1.665
169	Major Sapa Hammed	7	1.146
170	Mannambath Road	3	0.278
171	Mayilaparam Vani Villasam Road	5	0.677
172	Mele Chovva Pathiriparamba - Kanakavali Road	5	0.286
173	Miller Road	4	0.306
174	Nadal Gate - Munamb Road	4	1.179
175	Naranath Bridge Road	3	0.439
176	NH 66 - 33Kv Substation Road	4	0.815
177	NH 66 - Kuttikanam Mandapam Road	3	0.684
178	NH 66 - Ramatheru Ganapathi Temple Road	4	0.490
179	Nuchilot Road	4	1.100
180	OK.UP School - Kundathilmoola Road	5	0.974
181	Pallipram Chalil Motta Road	4	1.043
182	Panachikavu Road	3	1.083
183	Pannenpara - Kappal Kalyani Road	6	1.035
184	Peringalayi LP School - Kappad Jn Road	4	1.208
185	Pulayan Samudhaya Crematorium Road	4	0.604
186	Pulkopallam Vayal Road	4	0.543
187	Ramatheru Neduvappan Vayal Road	5	0.507
188	Rajendranagar Housing Colony Road	4	0.323
189	Savitha Talkies - Beach Road	4	1.145
190	Sea Shore - Indira Priyadarsini Road	4	0.417

191	Sisumandiram Road	6	0.551
192	Spinning Mill Road	3	1.122
193	Sky Palace -Mayalamanoorama Road	4	0.540
194	Thalap - Spinning Mill Road	5	0.259
195	Thalap Juma Masjid -Kottamarukandy Road	6	0.774
196	Thazhetheru-State ware House Road	4	1.034
197	University Maidanipalli Road	3	1.808
198	Velayudhan Road	6	0.510
199	Village Office - Vishachikilsa Kendram Road	3	1.219

Sl. No.	Road Name (New Roads)	Proposed Width (m)	Length (km)
159	Kadayath Madappura Road	8	0.094
200	Spinning Mill -Railway Gate-Thazhe Chovva Railway Gate Road	10	0.574

#### 4. ThazheChovva to Anjarakandy road

It is a major road starting from Thazhe Chovva junction which is the shortest road from Kannur Head Quarters to Mattannur Airport. The entrance to airport also lies on this road. But due to the narrow width, frequent bends traffic becomes slow in this road and leads to heavy congestion. This road has been proposed to be widened to 18 m so that existing issues can be reduced and can function as an Airport road.

#### 5. Thana-Kakkad-Pullooppi road

It is the main road that connects the Corporation to neighboring Panchayats like Narath, Kolachery, etc lying on the eastern side. It has a

branch road emerging from Korjan School and reaches to South Bazar.

This road also functions as a bypass for deviating the traffic from NH. The road widening proposal is such that 21m widening for stretch from Thana to Kunhippalli, 16m for the rest of the road ie Kunhippally to Pullooppikadav, while 16m widening is suggested for the portion between South Bazar and Korjan School. Another branch from Kunhippally to Panankav, via Kottali, is also given 16m widening proposal.

#### 6. Kannur-Alavil-Azheekkode road

Azheekkal Harbour is the main potential of this road. Due to the concentration of a large number of

commercial establishments and residential areas along its sides, traffic on this road is heavy. The connectivity of the harbor and port with railway station is through this road and hence a road widening proposal of 18m is given for this road.

#### 29.4 NH BYPASS

The National Highway Authority of India has started the construction of new bypass parallel to existing NH 66 with a Right of Way (ROW) of 45 m having a four line carriageway. The alignment passes through the Corporation area. The proposed bypass having a length of 26 km starts from the existing NH 66 at Kalliasseri passes through Puzhathi, Vaaram, Elayavur, Thilanur, Thankekkunnu and Keezhthalli and from there, it is merging with the NH 66 at Thazhe Chovva and merging with existing Chala bypass and finally ends at Edakkad to NH 66. This road will be the major corridor in the future.

#### 29.5 COASTAL HIGHWAY FROM AZHEEKAL PORT TO EDAKKAD

In order to serve the coastal areas better which would also enhance the tourism potential, it is proposed to have a Coastal Highway starting from Azheekal Port located outside study region but part of the influencing area of Kannur City, passing through Palliyamoola, Payyambalam Beach, Thottada, and terminating at Edakkad

on NH. Most of the roads that would form part of the coastal highway already exist and new roads have to be constructed wherever connectivity is not available. A road widening proposal of 16m is given for its entire length.

#### 29.6 MOBILITY HUB WITH PARKING PLAZA

For the interconnection of different modes of transport like road, rail, air and water transport, a mobility hub has been proposed near Mundayad Indoor Stadium, where the NH bypass crosses Mele Chovva-Mattannur Airport Road (proposed to be upgraded as part of Kannur-Bangalore NH). Proposed waterway corridor passes very near to this place. Kannur Railway Station is only 6km away from here. It will serve as the inter-state and inter-city bus terminal with linkages to the existing public transport terminals in the city, railway station and airport.

Location – Survey Nos. 3(P)& 4(P) of, Elayavoor Desom of Elayavoor Village.

Area – 12.20 Ha



Location details, need for the project, project brief, responsible agencies, suggested implementation mechanism, funding and resource mobilization, project period and priority of some selected priority projects are given in Chapter 31- Priority Action Plan, Fiscal Requirement and Resource Mobilization

## 29.7 JUNCTION IMPROVEMENT PROPOSALS

Intersections are the vehicle conflict points and are prone to accident risk. Therefore it is necessary to properly design the intersections for streamlining traffic flow and also for minimizing conflicts points. The following junctions are to be included in the first priority list and need to be provided with intersection improvement plans including signaling to impart traffic discipline and safety along with smooth mobility.

### 1. ThazheChovva Bypass Junction

This junction is the intersecting point of NH 66 with NH bypass. The four arms are leading to Mele Chovva, Thankekkunnu, Chala and Thottada. Located amidst medium level commercial facilities, it is a major traffic bottleneck due to the location of railway crossing very close to the junction. Frequent closure of railway gate causes huge vehicle queue and

traffic holdup. A combination of factors like wide open area at the bell mouth of bypass, location of commercial areas close to the junction on the Mele Chovva arm and absence of any traffic regulatory measures at the junction, makes the junction a chaotic one during peak hours. Considering the traffic issues witnessed at the junction, it is to be improved with proper signaling, crossing, islands, CCTV facilities etc.

### 2. Thazhe Chovva-Anjarakkandy Road Junction

It is a four armed staggered intersection located on NH 66, separated by a bridge. The road to Anjarakkandy via Movancherry leads from this junction. Medium level commercial establishments are dotting all the arms of the junction. Junction improvement works with essential widening; signaling, crossing, islands, CCTV facilities etc. are required as an immediate measure to mitigate the congestion here.

### 3. Mele Chovva

It is a 3 legged intersection. It is located on NH 66. The 3 arms are towards Thana, Thazhe Chovva and Mundayad directions respectively. Major landmarks of the junctions are the commercial area on both side of Thana-Thazhe Chovva road stretch, a temple and water tank located on right

side of Thana- Thazhe Chovva stretch and bus stops located at Mundayad arm. A median of short length is provided on the Thazhe Chovva arm. The junction is witnessing frequent traffic jams during peak hours due to inadequate junction area to handle large conflicting movements of traffic. Considering the traffic issues witnessed at the junction improvement should be done immediately for this important node of the city.

#### 4. Thana

Thana is one of major intersections located on NH 66. The four arms of the intersection lead towards City, Caltex, Korjan School and Mele Chovva directions respectively. Medium to large scale commercial areas are present on all arms of the intersection. Close to the intersection are located the office of Kerala Water Authority, Juma Masjid, and Specialty hospital generating large volume of vehicular, parking and pedestrian activities. An auto stand, taxi stand and bus stop are located on the Caltex Arm of the junction. Traffic signal, islands, crossings, CCTV facilities etc. are to be provided at the junction to regulate the flow of traffic.

#### 5. Caltex Junction

Caltex along with Gandhi Circle and Civil Station junction are the central areas of Kannur city and they handle the highest traffic volume.

These three intersections are located in a triangular shape with Caltex on the south, Gandhi circle on the north and Civil Station junction on the west. Caltex and Civil Station junctions are having three arms each while Gandhi Circle has four arms.

#### 6. South Bazaar – Kakkad Road Junction

South Bazaar is another major traffic bottleneck area in Kannur city located on NH 66. The third arm of the junction leads to Kakkad on the eastern direction. It is found to be inadequate to handle the large volume of traffic on the NH and substantial traffic moving towards Kakkad direction. Located amidst medium to large scale commercial establishments, traffic generation and pedestrian movements are very high resulting in traffic issues. The proposal at this junction is that the two roads leading to Kakkad should be merged to form a four lane road with channelizing island.

#### 7. AKG Junction

AKG Junction is a 3 armed intersection located on NH 66. The 3 arms are towards South Bazaar, SPCA Jn, and Puthiyatheru directions. AKG hospital is the major landmark of the city which is located on the junction itself on NH stretch. The road towards SPCA serves as one-way street with traffic not allowed towards Gandhi

Library. Detailed improvement proposal for the junction is needed based on existing topographic features and traffic flow.

### 8. Mundayad Indoor Stadium

It is a 4 arm staggered intersection located on Mele Chovva- Mattannur road. Two road leads from the road, one towards Chelora on the south and other towards Kakkad in the north, at a close interval of about 200m. There were minimal commercial establishments located on the main road and an Indoor stadium is located on the southern side of the main road. Considering the future development here when the proposed NH bypass is complete, there is a need for junction improvement immediately like signals, crossings, traffic islands, CCTV facilities etc.

### 9. Varam

It is a 3 arm intersection located on MeleChovva – Mattannur main road. A road to Vaaramkadavu deviates from the junction in the northern direction. Small commercial buildings are located on the main road. Considering the existing traffic flow, it needs sufficient improvement proposals to this junction.

### 10. Kunhippally Junction

Kunhippally is a 4 arm staggered intersection located on Kannur-Puthiyatheru road via Kakkad. One road deviates to Kannadiparamba

from this junction and another one to Pallikkunnu at a close interval in the opposite direction. The road at the junction is quite narrow and unable to cater even to the limited traffic movements causing occasional traffic blocks. Small and medium size commercial establishments are dotting the entire junction area and turning movements are found to be quite difficult due to location of buildings at the bell mouth area. Considering the traffic problems observed at the junction, a channelizing island is proposed at the bell mouth of Kannadiparamba and Puthiyatheru arms involving considerable land acquisition.

### 11. Chalad

Chalad is a four arm intersection located on Kannur-Azheekkode main road. The main road is intersected by the road from Pallikkunnu on NH 66 to Palliyamoola on the west. The road is found to be narrow at the junction area with inadequate turning radius for both Palliyamoola and Pallikkunnu bound traffic movements. Although the turning movements are negligible, they cause traffic hold up during such movements. The presence of Azheekkal Sea Port is the main potential of this junction, there is a need for junction improvement immediately with signals, crossings, traffic islands, CCTV facilities etc.



### 12. Plaza Junction

Plaza junction is one of the major junctions in Kannur city located on Railway Station Road. A road to Prabhat leads from this junction forming a 'T' intersection. The junction is located amidst high level commercial buildings. Eastern side of Railway station road has the railway line close to the road at a gap of about 300 m. Railway station is located close to the junction. Frequent traffic problems are observed at the junction caused by conflicting movements of traffic consisting of both heavy and light vehicles which necessitates an intersection improvement plan.

### 13. Muneeswarankovil Junction

It is another major junction in Kannur City handling large volume of vehicular and pedestrian traffic. Located close to the railway station on the railway station road, the road to SN junction deviates from this junction making it a three arm intersection. Located amidst Market, Temple and large commercial areas, the junction presents a chaotic situation during peak hours. A taxi stand and petrol bunk are also located close to the junction, generating additional traffic movements and conflicts. A necessary improvement work including pedestrian crossings is required as an immediate measure to mitigate the congestion here.

### 14. Stadium Junction

Stadium Junction is another major activity centre in Kannur City. It is a four arm junction located on the main road between Muneeswaran Kovil and Municipal Office Junction. The road from Caltex through Police Club Junction lands at the junction and another minor road lead to Talap. Old bus stand and Kannur stadium are located close to the junction. Around the Stadium, there are small commercial centers creating lot of vehicular, pedestrian and parking demand. Large numbers of vehicles are parked around the Stadium. Traffic movements are regulated through a central island with channelizing medians on the three major arms of the junction. Considering the existing traffic problems and geometric setting, the intersection should be improved by suitable road markings and signs.

### 15. Prabhat Junction

Prabhat Junction is a three arm intersection, located close to the cantonment area. The three arms of the junction lead towards City, SN Park and Plaza directions respectively. KV school area is present between the SN Park and City road stretch. Rotary and channelizing islands are provided at the intersection. An auto stand is located at the beginning of SN park road stretch on left side and bus stop at City-Plaza stretch. Traffic problems

are witnessed due to location of bus stop close to the junction. Considering the existing traffic problems and geometric setting, the intersection must be improved by suitable road markings and signs.

## 16. Thayil Junction

It is a 3 arm intersection located on City-Thazhe Chovva road. The road to Kuruva leads from the junction making it a three arm intersection. Small commercial establishments are there around the junction area. Occasional bus movements towards Kuruva side create traffic problems at the junction due to inadequate bell mouth at the Kuruva arm. The junction should be improved by necessary facilities. Pedestrian crossings are required as an immediate measure to mitigate the congestion here.

### 29.7.1 OTHER JUNCTIONS TO BE IMPROVED

Junction improvement projects are suggested on later phase at Valiyannur junction, Korjan School Junction, Kakkad-Pallipuram road junction, Kottali junction etc.

## 29.8 PARKING FACILITIES

### 29.8.1. ON STREET PARKING

One side street parking is suggested in the 13 stretches of road

shown in figure below. The identified road stretches are Railway land in front of Plaza-Muneeswaran Kovil Road, Payyambalam Beach Road, Payyambalam GHSS-Payyambalam Park, SN Park- in front of Theatre, SN Park road, Plaza-Prabath Junction, Thavakkara SBI Junction, Sub Registrar Road, Thalap road, Chinmaya Bala Bhavan road, Kannothumbal-Thana Road, Dhanalakshmi Hospital to Kakkad road, Railway station East gate to civil station-road stretch.

### 29.8.2. PAY AND PARK

Available locations that can be converted for pay and park uses are shown in Figure.29.2 and details are given in Table.29.2.

### 29.8.3. MULTI LEVEL CAR PARKING

Multi-level car parking method is proposed in the civil station, Collectorate, ground opposite Railway east gate and SBI junction.

Pedestrians are the most neglected group in the road development and these pedestrians include men, women, children, disabled and the elderly people. Footpaths are often reduced to widen roads, which affect the safety and comfort of pedestrian movement.

Table 29. 2 Details of identified pay and park lots

Code	Survey Number	Area(m <sup>2</sup> )	Area (Cents)
P01	5P, 6, 7P	4170	103
P02	226, 225	4423	109
P03	239, 240, 241, 242, 243	3546	88
P04	10P	1242	31
P05	180P	2180	54
P06	218P	777	19
P07	36P	2259	56
P08	203P	1384	34
P09	183P	1904	47
P10	215P	565	14
P11	164, 165p, 163p	3969	98
P12	238P, 250P	1182	29
P13	251P	572	14
P14	30P	391	10
P15	82P	2459	61
P16	77P, 78P, 80P, 253P, 252P	1523	38
P17	112P	3776	93
P18	Cantonment Area	1438	36
P19	886P	1666	41
P20	546P	360	9
P21	645P	1545	38
P22	56P	401	10
P23	56P	787	19
P24	337P,336P	3555	88
P25	788P	668	17
P26	788P	565	14
P27	577P	1192	29
P28	579P	2015	50

P29	585P,584P,583P,589P,587P,855	6329	156
P30	973P	452	11
P31	456P,557P	2583	64
P32	605,603P	1418	35
P33	322P	1160	29
P34	250P	5767	142
P35	614P,615P,635P,645P,648P, 650P	12402	306
P36	144P	1235	31

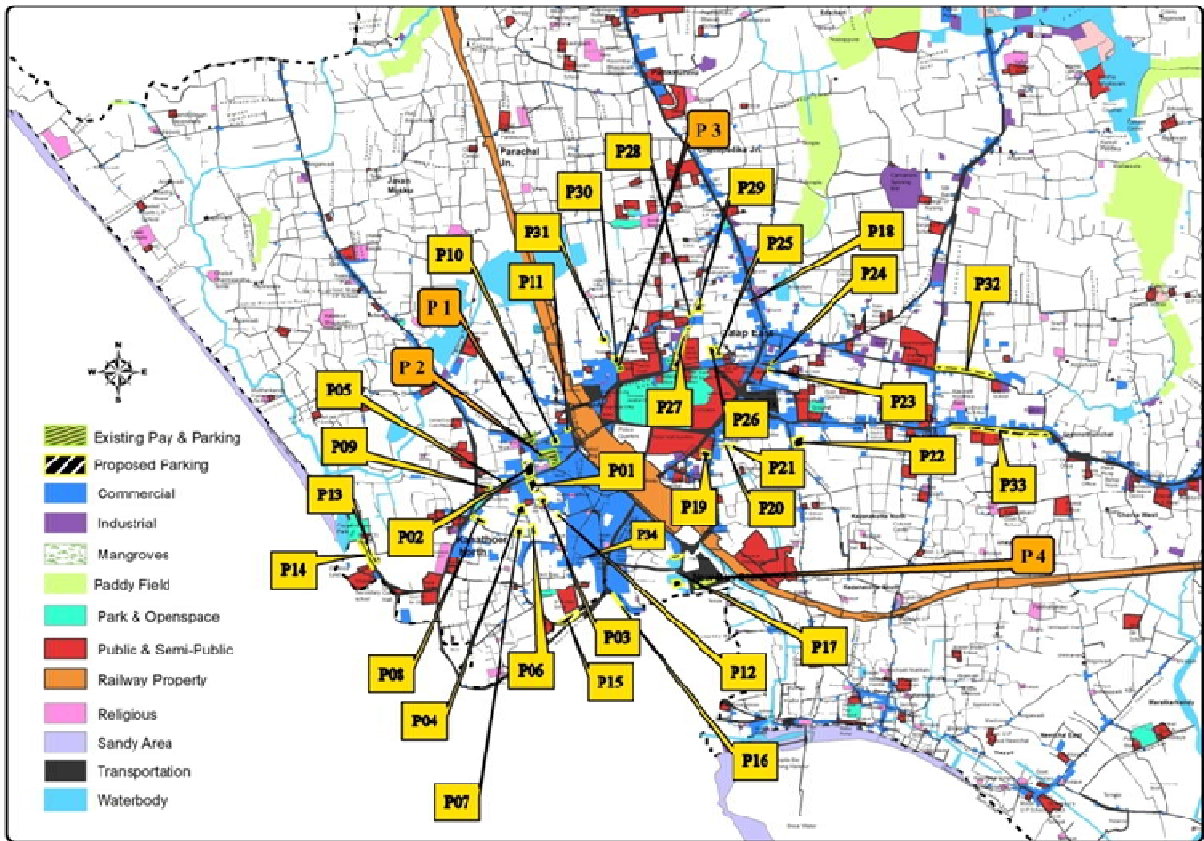


Figure 29.2 Location of identified pay and park lots

**29.9 PEDESTRIAN FACILITIES**

**29.9.1. SIDEWALKS OR WALKWAYS**

The pedestrian facilities that need to be considered are:

Sidewalks and walkways are “pedestrian lanes” that provide people

with space to travel within the public right-of-way, that is separated from vehicles. Sidewalks are associated with significant reductions in pedestrian collisions with motor vehicles. For Kannur Corporation, considering the IRC code provision, sidewalks with a width of 1.5m to 2.5m is proposed for all types of roads including arterial roads.



It is better to complete the road widening works before commencement of the sidewalks projects. But in unavoidable places with high pedestrian volume and where safety of pedestrians is under threat, the sidewalks may be constructed as an immediate measure.

### 29.9.2. MARKED CROSSWALKS

Marked crosswalks indicate optimal or preferred locations for pedestrians to cross and help designate right-of-way for motorists to yield to pedestrians. Crosswalks are often installed at signalized

intersections and other selected locations. Marked crosswalks are desirable at some high pedestrian volume locations (often in conjunction with other measures) to guide pedestrians along a preferred walking path.

### 29.9.3. SKY WALK

Examining the volume of pedestrian at urban centre, a sky walk proposal is introduced by Connecting Railway Station, old bus Stand, Corporation office, Town square, KSRTC Bus Stand, Caltex junction, Collectorate, Kannur University, New Bus stand, and Market. Ramps with sufficient gradient are the best option for exit /entry to the walkway from these points.

Location details, need for the project, project brief, responsible agencies, suggested implementation mechanism, funding and resource mobilization, project period and priority of some selected priority projects are given in Chapter 31 Priority Action Plan, Fiscal Requirement and Resource Mobilization.

### 29.10 CYCLE TRACKS

Separate bicycle tracks are proposed on major roads as they contribute physical, mental, environmental well-being of the people.



## 29.11 PUBLIC TRANSPORT SYSTEM

Public transportation systems include a variety of transit options such as buses, light rail, and subways. These systems are available to the general public involve, changing fare and keeping time schedule. The purpose of introducing and expanding the existing public transportation is to increase the access to it and the use of it. It is also to reduce traffic congestion.

### 29.11.1 RENOVATION OF OLD BUS STAND AND KSRTC BUS STAND

Since the infrastructure facilities of these two bus stands are insufficient, renovation should be done by means of provision of modern waiting shelters with seating facility, display board of bus timings, Wi-Fi facility, F.M Radio, music system, waste bins, drinking water facilities, coffee shops, comfort station etc.

### 29.11.2 STRENGTHENING OF PUBLIC TRANSPORT SYSTEM

There are hinterlands and remote areas in the study area that have comparatively less connectivity to the city or major roads. For serving the public, the followings methods for strengthening the public transport system shall be adopted:

- Extension of existing bus services to remote areas using methods of alternate service, alternate day services, weekly services etc.
- Circuit services connecting hinterlands.
- Operation of more services of K.S.R.T.C.

### 29.11.3 "SUGAMA"- MINI BUS SERVICE OF KANNUR CORPORATION

For the interior portion of the Corporation area having only narrow roads and which is not connected by bus service, a public transport system with mini bus services seems to be ideal. Municipal Corporation should take initiatives to start such mini bus service to cover the entire region with the assistance of financial institutions and co-operative banks and with co-ordination of Motor Vehicle Department, KSRTC, RTO, etc. The methods described in the above proposal can be adopted here also for covering all the remote portions of the city.

## 29.12 OTHER PROPOSALS

### 29.12.1 BUS BAYS WITH HI-TECH WAITING SHELTERS

The stopping of buses at bus stop on road makes traffic block forcing vehicles behind for unnecessary halts and delay. Construction of bus bays along road side is the best remedial measure and should be adopted wherever possible. And modern waiting shelters with seating facility, display board of bus timings, Wi-Fi facility, F.M Radio, music system and waste bins are to be provided for the comfort of passengers. Methods like sponsorship, advertising etc. can be adopted for fund raising. New bus bays are proposed at Vaaram Post Office, Kannothumbal, Melechovva, Talap, Thana, and Caltex.

### 29.12.2 TRUCK TERMINAL

There are no truck terminals in the markets within the plan area. Since the Airport and the Azheekal sea port can certainly generate large scale cargo movement through the city, a truck terminal is necessary at there. All modern facilities like comfort station, parking yard, loading and unloading facilities, fuel filling station, service station, weigh bridge, rest rooms, dormitories, booths for booking agents, restaurant, toilets etc. are to be arranged in the truck terminal. The ideal location of a truck terminal is

near the major corridor but away from the residential areas.

### 29.12.3 BEAUTIFICATION OF MAJOR ROADS AND JUNCTIONS

Name boards and sign boards for all roads, landscaping and tree plantation of major roads, drains and slab covers to all the roads, comfort stations, waste bins etc. must be immediately provided at every road stretch of the study area.

### 29.12.4 MARINE WALK/RIDE

A separate track for both walking and bicycles is proposed at the entire stretch of the Coastal Highway from Azheekal Port to Edakkad. It will be very helpful to encourage the tourism activities of the study area. Necessary eating arrangements, street lights, FM radio, free Wi-Fi etc. should be provided.

### 29.12.5 SHUTTLE SERVICE AT TOURIST DESTINATIONS

A shuttle service should be provided by connecting all the tourist destinations within the study area. Mini buses may be used for this and it should cover the bus stand as well as railway station.

### 29.12.6 PUBLIC INFORMATION SYSTEM

By making use of Intelligent Transport System (ITS), adequate public information system is to be provided at all bus stops, terminals and in the transit vehicles for helping the commuters. Measures need to be evolved to provide separate coloring schemes for public transport buses for easy identification of desired destination points.

### 29.12.7 PREPAID AUTO AND TAXI STAND

Prepaid auto and taxi stand must be provided at Railway station and all the bus stands.

### 29.12.8 TRAFFIC REGULATIONS LIKE ODD EVEN SYSTEM

Since the number of vehicles entering the city increases day by day, it is necessary to regulate it. For that, regulations like odd even system can be adopted.

The system allows the vehicles having registration number ending with odd numbers and even numbers on alternate days. The working should be ensured by means of fine. For the effectiveness, policy level strategies should be adopted.

### 29.13 RAILWAY OVER BRIDGES (ROB)

The Kannur Municipal Corporation area is divided into two halves by the railway line passing from the north to south direction. Underpasses or fly overs are located at very few points only. For ensuring smooth mobility and interconnection between east and west parts of the town two Railway Over Bridges are proposed one at Pallikkunnu gate near Zonal Office and other at Nadal gate at Edakkad.

### 29.14 OTHER MODES OF TRANSPORTATION

#### 29.14.1 WATERWAYS

The proposed stretch of West Coast Canal or National Waterway No. 3, from Bepore to Kasargod which is a continuation of existing network through Kollam-Kottappuram-Bepore, passes through Kannur Corporation. In Kannur district, it connects Mahe River at south with Kavvayi River.

#### 29.14.2 RAIL CONNECTIVITY

The study area has a broad gauge railway line from Shoranur to Mangalore and then to Panavel via Konkan railway. The railway stations located within the study 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. All trains including Thiruvananthapuram Rajdhani Express and Kochuveli Garib Rath stop at Kannur. Six daily trains and around 15 weekly or bi-weekly trains connect Kannur to Thiruvananthapuram.

#### 29.14.3 AIR CONNECTIVITY

Kannur International Airport is located in Mattannur Municipality. As it has great potential in the traffic scenario of the study area, the linkage with the Airport should be

strengthened by means of safe and continuous traffic flow.

#### 29.15 INFERENCE

Based on detailed traffic and transportation studies, projection of traffic volume on major roads has been carried out for various horizon years considering the growth potentials of the study area. Based on traffic projection, a long term transport plan has been prepared considering all modes of traffic like road, rail and air so that a sustainable, people friendly city can be created.

