



## **CHAPTER 1.0**

# **INTRODUCTION**

### **1.1 Background**

Vijayawada is an important city in the urban scape of Andhra Pradesh. It stands third in terms of population size amongst cities of Andhra Pradesh. It is a major trading centre. It is well known for its educational institutions. Recent trends indicate fast industrialization. The city is an important centre of pilgrimage and domestic tourism. Strategically located, the city is experiencing fast growth as a multi-functional, national city. Considering the growing importance of the city and the need to provide a good intra-city transport system and service to meet the mobility needs of the people of the city, the Municipal Corporation of Vijayawada have initiated preparation of Comprehensive Traffic and Transport Plan for the city. The study is being carried out by M/s Consulting Engineering Services (India) Private Limited.

### **1.2 Study Objectives**

The study objectives are:

- To improve the road network system within the city in order to provide smooth traffic flow
- To study the junctions and major road intersections and indicate necessary modifications for smooth traffic flow
- To propose bridges, fly-overs across the canals, rivulets for easy access to the central business district
- To create various zones based on the land use patterns and to mark the same on digitized maps
- To provide Link Roads, major internal roads, inner Link Roads within the city to reduce heavy vehicular traffic and thereby pollution
- To propose fly-overs, grade separators to ease access in to the high ways and main roads of the city
- To develop development strategies for the proposed roads
- To identify the roads which are to be widened to accommodate increased traffic demand
- To locate pedestrian sub-ways, parking lots, foot paths, footbridges, controlled intersections, bus bays etc.
- To prepare commercial models for various proposals.
- To estimate the social development due to the creation and the up gradation of the facility and how it reflects on the land values, economic growth etc.



### 1.3 Methodology

The different activities as per the detailed TOR have been grouped into three main activities, I to III, which are further, detailed under various task groups. The broad stages of methodology adopted for the study are as under:

Activity No.	Activity	Tasks
I	Situation analysis and diagnosis	<ol style="list-style-type: none"><li>1. Mobilisation and start up activities</li><li>2. Collate, review and appraise suitability of existing data</li><li>3. Appraisal of existing situation</li><li>4. Development of Baseline Data</li><li>5. Data analysis</li></ol>
II	Travel Demand Forecasting and Formulation of Transportation Plan	<ol style="list-style-type: none"><li>1. Development of Travel Demand Forecasting Models</li><li>2. Travel Demand Forecasting</li></ol>
III	Transport Development Strategies	<ol style="list-style-type: none"><li>1. Short term improvement measures</li><li>2. Medium and Long term improvement measures</li><li>3. Cost estimates and phasing</li><li>4. Action Plan, Implementation strategy and management plan</li><li>5. Feasibility of identified Transportation Facilities</li></ol>

### 1.4 Deliverables

The deliverables of the study are:

- Inception Report
- Interim Report,
- Draft Final Report, and
- Final Report

Inception Report (IR) was submitted on 26th June 06. The IR detailed the study methodology including identification of various surveys.

This Interim Report describes the traffic and travel characteristics of the city based on the extensive surveys and studies carried out.



## 1.5 Study Area

The Study Area includes the Vijayawada Municipal Corporation area. It extends over 61.88 sq. km. Administratively it is divided into 3 circles and 59 wards. As of 2001, the study area contained a population of 8.45 lakhs. The distribution of population size, by wards, is given in **Table 1.1**.

**Table 1.1: Vijayawada-Distribution of Population by Wards**

SI. No.	Ward No	Population
1	1	13952
2	2	13866
3	3	12978
4	4	14659
5	5	14399
6	6	15146
7	7	14365
8	8	15493
9	9	14260
10	10	12969
11	11	13953
12	12	13064
13	13	15242
14	14	15737
15	15	14721
16	16	14531
17	17	13987
18	18	14315
19	19	12830
20	20	13713
21	21	12865
22	22	14648
23	23	15341
24	24	15243
25	25	15209
26	26	15480
27	27	15645
28	28	15124
29	29	15402
30	30	14716
31	31	15552
32	32	15657
33	33	15202



SI. No.	Ward No	Population
34	34	15373
35	35	13435
36	36	15278
37	37	14887
38	38	15343
39	39	15173
40	40	15182
41	41	13956
42	42	13331
43	43	13919
44	44	13879
45	45	13173
46	46	13193
47	47	13880
48	48	13966
49	49	12946
50	50	13785
51	51	13594
52	52	14015
53	53	14646
54	54	13850
55	55	14564
56	56	13176
57	57	13157
58	58	13827
59	59	13413
Total		845217

### *Traffic Analysis Zones*

For purpose of the study, the Study Area has been identified into 59 Traffic Analysis Zones (TAZs). They are coterminous with the municipal wards. Areas outside the Study Area have been identified into 15 external zones.

### *Planning Sectors*

For purposes of easy understanding the TAZs have been regrouped into 11 Planning Sectors. **Table 1.2** presents the details of planning sectors.



**Table 1.2: Vijayawada-Planning Sectors**

<b>Sector No.</b>	<b>Designated Area</b>	<b>Clubbed Wards / TAZs</b>	<b>Description</b>	<b>Population 2001</b>
1	West Vijayawada	26,27,28,29	Western Part of the Indrakiladri hill	61652
2	K R Market	25,38,39,40	Indrakiladri hill (Durga temple), K.R.Market	60908
3	Chittinagar	30,31,32,33,34, 35,36,37	Northern Part of Indrakiladri hill, Milk Project, Chittinagar	120102
4	Gandhinagar - Satyanarayana puram	42,43,44,45,46, 47	In between Ryves Canal and Eluru canal	81376
5	Vijayawada Railway Junction	41,48,49,50,51	In between Eluru Canal and Vijayawada-Kolkata Railway line	68248
6	North Vijayawada	52,53,54,55,56, 57,58,59	Northern Part of Vijayawada - Hyderabad and Vijayawada - Kolkata Railway line	110650
7	Gunadala	1,3,4,5,6,7	Gunadala, Ramavarappadu, Khristratpuram, Marry Matha temple area	85500
8	Autonagar	2,9	Autonagor Industrial Area	28126
9	Patamata	8,10,11,12,13	Patamata, Benz Circle, New RTC Colony area	70722
10	C B D	17,18,19,20,21	CBD Area, New CBD area	67711
11	Krishnalanka	14,15,16,22,23, 24	Southern Part of the Bandar Canal	90222
	Total			845217

**Figure 1.1** depicts the Planning Sectors and Traffic Analysis Zones (TAZs)

## 1.6 Surveys and Studies

To appreciate the traffic and travel characteristics of the Study Area, a large number of traffic surveys have been carried out during the period April to August, 2006. This Interim Report presents the characteristics based on an extensive analysis of the surveys and studies carried out. **Table 1.3** presents the program of traffic surveys carried out



**Table 1.3: Program of Traffic Surveys and Studies**

Sl. No.	Type of Survey	Locations/Sections /Length/Sample	Date	Duration
1	Outer Cordon Surveys	7 Locations	03/07/2006 to 14/07/06	24 Hours
2	Screen Line Surveys	17 Locations	19/04/06 to 04/07/06	16 Hours
3	Mid Block Cont Surveys	7 Locations	19/04/06 to 13/07/06	24 Hours & 16 Hours
4	Junction Count Surveys	17 Locations	25/04/06 to 30/06/06	12 Hours
5	Household Survey	4252 House Hold	19.7.06 to 15/8/06	-
6	Parking Surveys	8 Sections & 2 Lots	28/04/06 to 04/07/06	12 Hours
7	Pedestrian Count Surveys	6 Locations & 3 Sections	25/04/06 to 28/06/06	12 Hours
8	Rail Gate Closure Survey	4 Locations	04/07/06 to 28/07/06	24 Hours
9	Public Transport User Surveys	150 Interviews	01/06/06 to 30/04/06	-
10	Intermediate Public Transport (Users/Operators) Surveys	150 Interviews	01/06/06 to 15/07/06	-

## 1.7 Interim Report

This report is the second of the study deliverables and presents a comprehensive account of the extent of traffic surveys and studies carried out to develop a baseline database and a detailed analysis of the existing traffic and transportation situation in the city.

The report has been organized into seven chapters and annexures. The structure of the report is as follows:

### Executive Summary

- Chapter 1.0 Introduction
- Chapter 2.0 Study Area Characteristics
- Chapter 3.0 Vijayawada City Development Plans - A Review
- Chapter 4.0 Traffic Surveys and Studies
- Chapter 5.0 Transportation System and Traffic Characteristics
- Chapter 6.0 Household Socio-Economic and Travel Characteristics
- Chapter 7.0 Issues

### Annexures