



CHAPTER 11.0

BRTS - COST ESTIMATES

11.1 Cost Estimates

The overall investment costs for development of BRTS along the five identified corridors is estimated to be 53,941 Lakh. This works out to Rs 1197 lakh/km of the BRTS. However, excluding Yellow Corridor (Root No 5), The total cost works out to Rs 50,726 Lakh for 38.9 Km and per km cost works out to Rs 1303 Lakh. The overall cost estimate by components is given in **Table 11.1**. Cost estimates by individual corridors are given in **Tables 11.2 to 11.7**.

Table 11.1: Vijayawada BRTS – Cost Estimate

Sl. No	Item	Amount (Rs. Lakhs)
1	Corridor Physical Infrastructure - Green Corridor - Red Corridor - Blue Corridor - Orange Corridor - Yellow Corridor	9,512 5,768 12,700 5,565 3,062
2	Improvement to Loop Road	3,816
3	Terminals - Central Bus Terminal - Kanuru Nodal Bus Terminal - Ramavarapupadu Nodal Bus Terminal - Nunna Nodal Bus Terminal	1000 500 500 500
4	BRT Buses (100 nos @ 40 Lakhs per Bus)	4,000
5	Intelligent Transport System (ITS) (LS)	2,500
6	Logistics to Traffic Police	1,000
7	Contingencies	2,515
8	Surveys and Studies (LS)	1,000
Total Amount		53,941

Note: Land and O&M Costs not included



**Table 11.2: Green Corridor: Mahatma Gandhi Road
 (Bus Terminal to Kanuru)**

Cost Estimate

Sl No	Item	Unit	Length/ Number	Lumpsum / Unit Rate (Rs. Lakh)	Amount (Rs. Lakh)	Remarks
1	Road Pavement including Foot Paths	Lane Km	96	60	5760	
2	Bridges / ROBs / Flyovers	-	-	-	-	
3	Geometric Improvement of Intersections and Signal Control System - <i>Police Control Room Junction</i> - <i>Governerpet Junction</i> - <i>Vangaveeti Ranga Statue Junction</i> - <i>IGM Stadium Junction</i> - <i>Police Control Room Junction</i> - <i>Benz Circle Junction</i> - <i>NTR Statue Junction</i> - <i>Autonagar Junction</i>	Junction	8	100	800	
4	Improvement of Other Minor Junctions	LS	-	-	500	
5	Provision of Median Railing	Km	24	10	240	
6	Street Furniture	Km	12	1	12.0	
7	Street Lighting	Km	12	5	60	
8	Traffic Management	Km	12	5	60	
9	Provision of Bus Stops / Shelters	Shelter	16	5	80	
10	Provision of Parking Facilities	ECS	2000	1	2,000	
Total =					9,512	

Note: Land and O&M Costs not included



**Table 11.3: Red Corridor: Eluru Road
 (Bus Terminal to Ramavarapupadu Junction)**

Cost Estimate

Sl No	Item	Unit	Length/ Number	Lumpsum / Unit Rate (Rs. Lakh)	Amount (Rs. Lakh)	Remarks
1	Road Pavement including Foot Paths	Lane Km	54.4	60	3264	
2	Bridges / ROBs / Flyovers	-	-	-	-	
3	Geometric Improvement of Intersections and Signal Control System - <i>Swarna Palace Hotel Junction</i> - <i>Vijaya Talkies Junction</i> - <i>Seetarampuram Junction</i> - <i>Chuttugunta Junction</i> - <i>Machavarm Hanuman Temple Junction</i> - <i>Ramavarapupadu Junction</i>	Junction	6	100	600	
4	Improvement of Other Minor Junctions	LS	-	-	500	
5	Provision of Median Railing	Km	13.6	10	136	
6	Street Furniture	Km	6.8	1	6.8	
7	Street Lighting	Km	6.8	5	34	
8	Traffic Management	Km	6.8	5	34	
9	Provision of Bus Stops / Shelters	Shelter	12	5	60	
10	Provision of Parking Facilities	ECS	1133	1	1,133	
Total =					5,768	

Note: Land and O&M Costs not included



**Table 11.4: Blue Corridor: G S Raju Road
 (Bus Terminal to Payakapuram-Nunna)**

Cost Estimate

Sl No	Item	Unit	Length/ Number	Lumpsum / Unit Rate (Rs. Lakh)	Amount (Rs. Lakh)	Remarks
1	Road Pavement including Foot Paths	Lane Km	96	60	5760	
2	Bridges / ROBs / Flyovers - <i>Eluru & Budameru Bridge at Govt. Press Junction</i> - <i>Widening ROB at Devinagar</i>	Sq m	3000	0.25	750	
3	Geometric Improvement of Intersections and Signal Control System - <i>Govt Hospital Junction</i> - <i>Gandhi Center Junction</i> - <i>Intersection with Corridor No-4</i> - <i>Cement Factory Bridge Junction</i> - <i>Govt Press Junction</i> - <i>Ajitsingh Nagar Junction</i> - <i>Pipula road Junction</i> - <i>Pumping Drainage Junction (Kandrika)</i>	Junction	8	100	800	
4	Improvement of Other Minor Junctions	LS	-	-	500	
5	Provision of Median Railing	Km	24	10	240	
6	Street Furniture	Km	12	1	12.0	
7	Street Lighting	Km	12	5	60	
8	Traffic Management	Km	12	5	60	
9	Provision of Bus Stops / Shelters	Shelter	16	5	80	
10	Provision of Parking Facilities	ECS	2000	1	2,000	
Total =					12,700	

Note: Land and O&M Costs not included



**Table 11.5: Orange Corridor: S N Puram Road
 (Bus Terminal to Machavaram Hanuman Temple)**

Cost Estimate

SI No	Item	Unit	Length/ Number	Lumpsum / Unit Rate (Rs. Lakh)	Amount (Rs. Lakh)	Remarks
1	Road Pavement including Foot Paths	Lane Km	44	60	2640	
2	Bridges / ROBs / Flyovers - <i>Machavaram Bridge (across Ryves canal)</i> - <i>Near Gymkhana Ground (across Eluru canal)</i>	Sq m	1500 1650	0.25 0.25	375 413	
3	Geometric Improvement of Intersections and Signal Control System - <i>Goods Shed Junction</i> - <i>Vijayawada Railway Station</i> - <i>Pezzoi pet Junction</i> - <i>Old SN Puram Railway Station Junction</i> - <i>Madhura Nagar Road</i>	Junction	5	100	500	
4	Improvement of Other Minor Junctions	LS	-	-	500	
5	Provision of Median Railing	Km	11	10	110	
6	Street Furniture	Km	5.5	1	5.5	
7	Street Lighting	Km	5.5	5	28	
8	Traffic Management	Km	5.5	5	28	
9	Provision of Bus Stops / Shelters	Shelter	8	5	50	
10	Provision of Parking Facilities	ECS	917	1	917	
Total =						5,565

Note: Land and O&M Costs not included



**Table 11.6: Yellow Corridor: Root No 5 Road
 (Eluru road Junction - Executive Club Junction - Auto Nagar)**

Cost Estimate

Sl No	Item	Unit	Length/ Number	Lumpsum / Unit Rate (Rs. Lakh)	Amount (Rs. Lakh)	Remarks
1	Road Pavement including Foot Paths	Lane Km	12.30	30	369	
2	Bridges / ROBs / Flyovers	-	-	-	-	
3	Geometric Improvement of Intersections and Signal Control System - <i>Eluru road Junction</i> - <i>Swarna Palace Hotel Junction</i> - <i>Besant Road Junction</i> - <i>Dornakal Road Junction</i> - <i>Madhu Kalyanamandapam Junction</i> - <i>Siddartha Arts College Junction</i> - <i>Sunnam Battilu Junction</i> - <i>Executive Club Junction</i> - <i>Gurunanak Colony Road Junction</i> - <i>Auto Nagar Junction</i>	Junction	10	100	1,000	
4	Improvement of Other Minor Junctions	LS	-	-	500	
5	Provision of Median Railing	Km	-	-	-	
6	Street Furniture	Km	6.15	1	6.2	
7	Street Lighting	Km	6.15	5	31	
8	Traffic Management	Km	6.15	5	31	
9	Provision of Bus Stops / Shelters	Shelter	20	5	100	
10	Provision of Parking Facilities	ECS	1025	1	1,025	
Total =					3,062	

Note: Land and O&M Costs not included



**Table 11.7: Brown Corridor: Loop Road
 (City Bus Terminal-Goods Shed Junction -VMC Junction- City Bus Terminal)**

Cost Estimate

Sl. No	Item	Unit	Length/ Number	Lumpsum / Unit Rate (Rs. Lakh)	Amount (Rs. Lakh)	Remarks
1	Road Pavement including Foot Paths	Lane Km	21	60	1260	
2	Bridges / ROBs / Flyovers - <i>Widening of VMC Bridge</i> - <i>City Bus Terminal Bridge</i>	Sq m	3750	0.25	938	
3	Geometric Improvement of Intersections and Signal Control System - <i>VMC Junction on NH-9 Road</i>	Junction	1	100	100	
4	Improvement of Other Minor Junctions	LS	-	-	500	
5	Provision of Median Railing	Km	5.24	10	52.4	
6	Street Furniture	Km	2.62	1	2.6	
7	Street Lighting	Km	2.62	5	13	
8	Traffic Management	Km	2.62	5	13	
9	Provision of Bus Stops / Shelters	-	-	-	-	
10	Provision of Parking Facilities	-	-	-	-	
Total =						3,816

Note: Land and O&M Costs not included

Source of Funds

At present a number of sources are available for mobilisation of funds for the project. They include:

- Budget (Internal resources) of VMC
- Market Borrowings, Fees, Cess, etc. (VMC)
- State Government Grants-in-aid
- Assistance from Government of India (JNNURM, UIDP, etc)
- National and International Finance Institutions
- Private sector (Bus fleet through franchising, parking areas, terminals, etc.)
- Property development
- Advertising
- Others



Concerted efforts need to be made to mobilize resources from a variety of sources to make the programme financially viable and self-sustaining.

The VMC needs to take the lead in developing the physical infrastructure in terms of ways, terminals, bus stops, shelters, etc and create institutions to facilitate participation by private sector under PPP model and manage the programme implementation and operation.