



Study of Trip Generation and Trip Production and route Replanning for Gandhinagar City

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Abstract - In today's world, the increasing opportunity has increased the number of commuter, and increasing competition has created a time constrain for every single commuter in the life. This has led to a huge increase in use of private vehicles. And it adversely harms the environment. The project deals with the route optimization of Gandhinagar Public transport to increase it efficiency and inter connectivity within the city, and also to reduce the delay in time and the effects of the plan of use of electric bus instead of conventional diesel bus. The methodology follow the sequence of objective, data collection, data analysis, planning of new routes and compassion of electric and diesel bus.

I Introduction

The use of fossil fuel bus has increased a lot due to increase in migration of people from one city to another city in search of opportunity. This has led to high usage of the limited fossil fuel available in earth and also it creates a high amount of carbon foot print. The project speaks about how the above things has affected our environment and surrounding and how it also indirectly affects the health of human. The electric bus is trending technology in today world as a alternative of diesel bus as it reduce on road transportation and also it reduce the

II Need for Study

- Migration of people from rural to urban in search of opportunity increase population
- The fossil fuel vehicle create a high green house gases and on road pollution and traffic congestion
- India's cities have been witnessing an increasing trend in motorization with deteriorating air quality, and there have been calls to promote public transport as a way out of this gridlock
- The demand for crude oil as well as CO₂ emissions will reach untenable levels. Lack of proper public transport

III Objective

- Route planning for VITCO bus Service for efficient connectivity within the city
- Comparing of electric bus with convection diesel bus
- Analyzing the benefit of use of electric bus and hybrid bus instead of convectional diesel bus

IV Study Area

- Coordinates: 23.223°N 72.650°E
- Gandhinagar's streets are numbered, and have cross streets named for letters of the Gujarati alphabet (e.g., "k", "kh", "g", "gh", "ch", "chh", "j").
- The new capital city was planned by Chief Architect H.K. Mewada, educated at Cornell University, and his assistant Prakash M Apte
- All streets cross every kilometre, and at every crossing traffic circles decrease the speed of traffic

V Methodology

Problem Definition followed by Objective followed by Data Collection and analysis and then conclusion

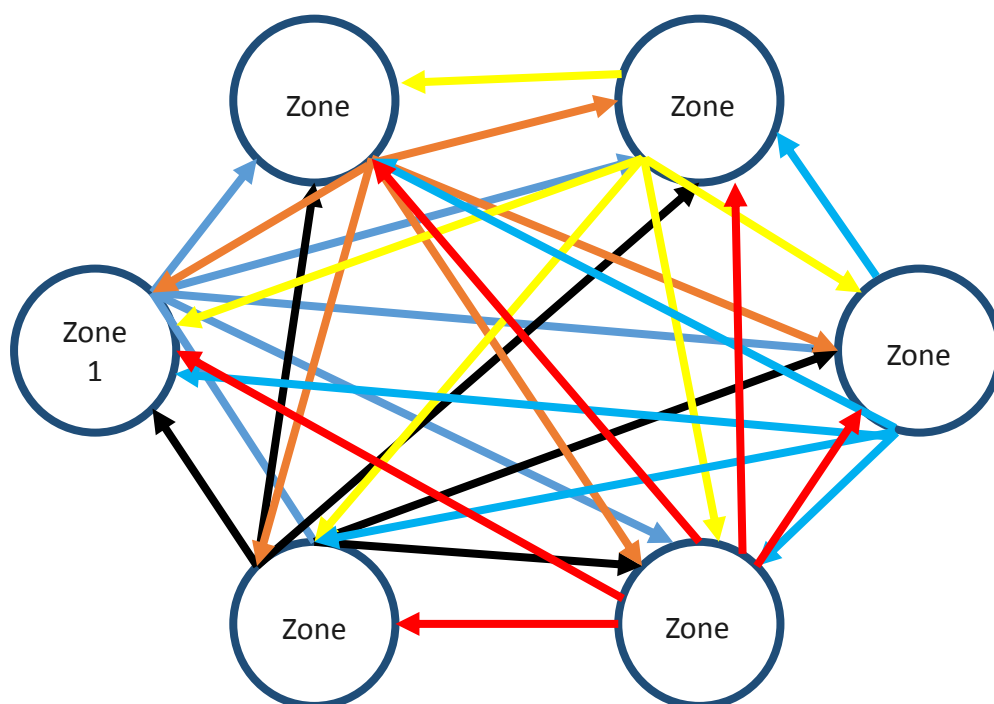
VI Data Collection

- Maintenance Data

Zone 1	Trip Produced-T_i	132
	Trip attracted - T_j	116
Zone 2	Trip Produced- T_i	144
	Trip attracted - T_j	156
Zone 3	Trip Produced- T_i	144
	Trip attracted - T_j	176
Zone 4	Trip Produced- T_i	204
	Trip attracted - T_j	112
Zone 5	Trip Produced- T_i	116
	Trip attracted - T_j	168
Zone 6	Trip Produced- T_i	100
	Trip attracted - T_j	112

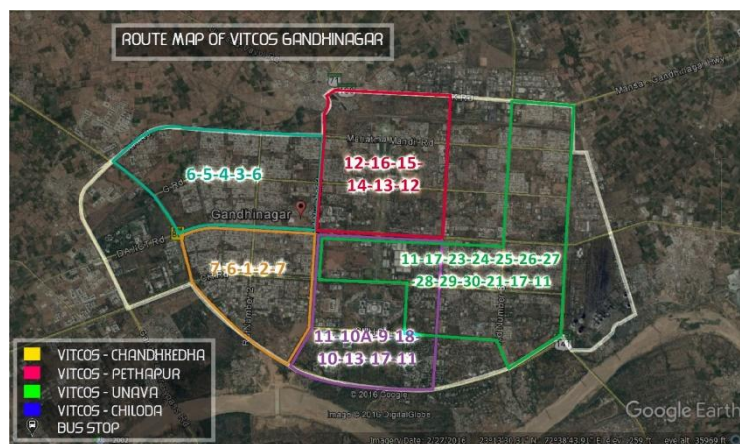
Once the zoning process of the city has been done into various zone for easy analysis of trip produced and trip attracted. The zoning has been mostly done on residential and commercial bases. Now for the replanting of the route the survey of ORIGIN and DESTINATION is to be done, for the survey of origin and destination the format has been taken from IRC SP-19 which provides with various method and way to conduct survey to find trip produced and trip attracted. The Data sheet for the Survey is provided in the appendix at the last of the thesis the summary for the various zone and its trip produce and trip attracted.

Network Diagram



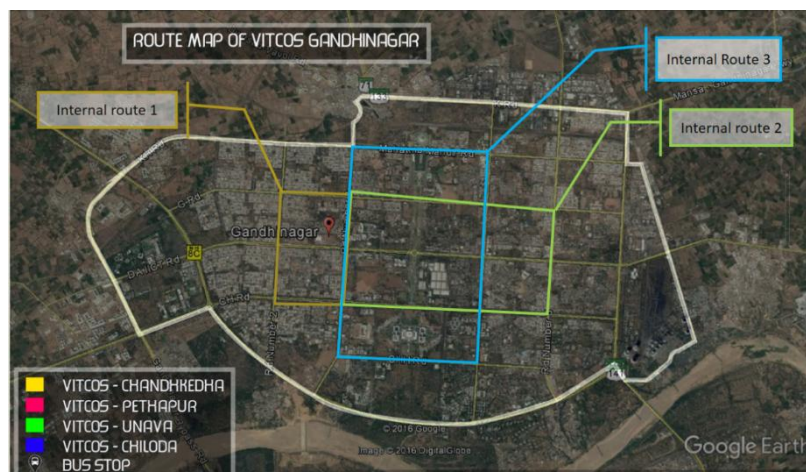
VII Conclusion

Circular route No	sector
1 circular	6-5-4-3-6
2 Circular	7-6-1-2-7
3 circular	12-16-15-14-13-12
4 circular	11-10A-9-18-10-13-17-11
5 Circular	11-17-23-24-25-26-27-28-29-30-21-17-11



Internal Route

Route Number	Connectivity
Route number 1	1,2,3,4,5,6,7,8
Route Number 2	11,12,16,17,22,23,13,14,15,24,10
Route number 3	5,6,7,10,11,12,13,14,15,16,17,21,22,23,24



VIII References

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