



Redesign Of Kalol Bus Terminal

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Abstract

A bus terminal, or terminus, is the point where a bus route starts or ends, where vehicles stop, turn or reverse, and wait before departing on their return journeys. It's also where passengers board and alight from vehicles. It also often provides a convenient point where services can be controlled from. This thesis work is about redesign the kalol bus depot situated in kalol. Kalol buses are included in GSRTC(Gujarat State Road Transport Corporation) which forms a mass transit system of transportation providing a linkage between important cities and terminals such as mehsana, qandhinagar and ahmedabad. In theoretical framework, the focus is on the new concepts and implementations developed in the urban transportation sector which are useful for passengers as well as bus terminal itself. The effective transportation systems regarding lower expenditures were handled according to the travel demands they serve. This work also consist of developing a redevelopment plan of kalol bus terminal to provide latest and advanced features in order to increase the efficiency as well as usefulness.

Keywords: Bus Terminal, GSRTC, Kalol Bus Terminal

I. INTRODUCTION

A bus terminal, or terminus, is the point where a bus route starts or ends, where vehicles stop, turn or reverse, and wait before departing on their return journeys. It's also where passengers board and alight from vehicles. It also often provides a convenient point where services can be controlled from. The size and nature of a terminal may vary, from a roadside bus stop with no facilities for passengers or bus crews, to a purpose built off-road bus station offering a wide range of facilities. If the number of vehicles arriving and departing is low, a roadside bus stop, with no facilities, will normally be adequate. With a large number of vehicles arriving and departing, it may be necessary to provide off-road bus station facilities for the convenience of passengers and to reduce traffic congestion. It's essential that stations are not only constructed to a suitable design and with adequate capacity, but also that they are suitably located. There are a number of considerations in deciding the best location. The location should be where routes should logically connect or terminate, as determined by passenger demand patterns. If the station is used as an intermediate stopping point on routes passing through, it should be conveniently located for passengers joining or leaving vehicles.

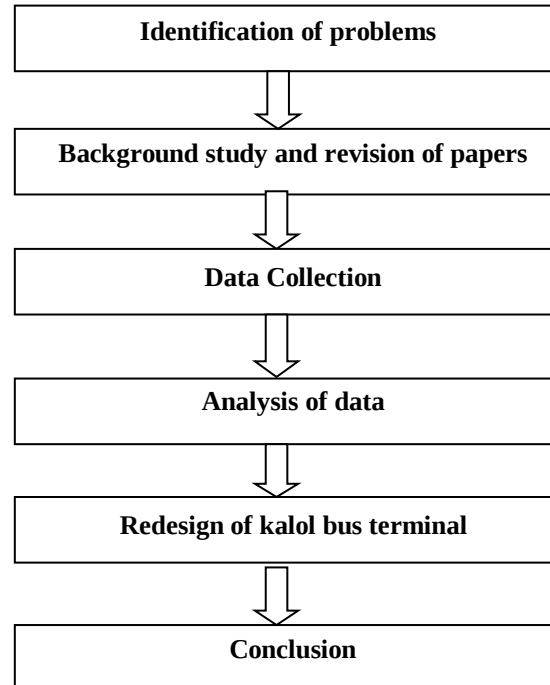
II. NEED OF THE STUDY

Bus transportation is one of the most important transportation of any city. So for a better functioning of a city's transportation, an efficient and highly advanced bus terminal is required. This will enable passengers to get a good and convenient service of transportation. Redesign of bus terminal includes implementation and installation of highly advanced features and new technologies to make it a better prospect for both transportation and passengers. An integral factor improving a transport system's success is the quality of convenient transfers and the movement of passengers within terminal spaces. It is important to integrate terminal facilities into the physical surroundings. Main objectives are as follow:

- To determine the various factors affecting the efficiency of the terminal
- Superior and high-tech services to the passengers
- Enhance the overall prospect of terminal
- Evaluation of various constraints in terms of capacity, services and frequency of buses
- To minimize the risk factors in almost all department
- To suggest the implementation of a better management and communication between passengers and various concerned authorities and department
- To increase the maintenance measures
- To suggest Improvements to increase the flexibility of the terminal for varying traffic during different time periods.

- To suggest a better inter department communication
- Superior services and maintenance to the buses by suggested measures.
- To suggest services which can be useful in present as well as future.

III. METHODOLOGY



3.1 Data Collection

- As of 2011 India census, Kalol had a population of 133,737 with 69,898 males and 63,839 females; it has 13,719 children aged 0–6 (7,397 male and 6,322 female), and 103,561 literates (57,548 male and 46,013 female). Kalol is a city and a municipality in Gandhinagar district in the Indian state of Gujarat. Kalol is located at 22°36'22"N 73°27'47"E / 22.606°N 73.463°E / 22.606; 73.463. It has an average elevation of 100 metres (328 feet).
- Problems at kalol bus terminal:
 - No high tech features
 - Very congested accessible roads
 - Traffic jams near bus depot
 - Infrastructure is old and weak
 - Lack of shopping area, recreational spaces and entertainment infrastructure like cinema hall
 - No proper place for food
 - No cctv camera
 - The sitting arrengrment in waiting area is not comfortable or proper
 - No sign board
 - Lack of ITS components such as electronic ticket counter, digital sign boards etc.
 - Very poor safety management
 - Improper use of vacant space
 - No four wheeler parking arrangement
 - No proper fencing on entry and exit
 - No medical facility

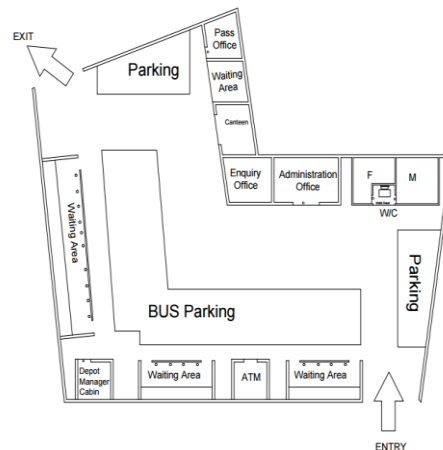


Figure 1. Existing layout of kalol bus terminal

IV. Infrastructural Requirement

1. Feeder infrastructure: The infrastructure which connects the bus terminal with the city is referred to as supporting access (or feeder) infrastructure. It includes provision for various modes that provide access and act as feeder to the bus terminal. These include parking for private vehicles; drop-off and pickup bays for private vehicles, taxis, auto rickshaws cycle rickshaw, shared vehicles such as vans/jeeps etc.; and bays and/or stops for local bus services. Integration of all these modes makes for higher passenger convenience and increased intermodal accessibility.

2. Seating: Seating in and around the bus terminal complex shall be planned to cater to a minimum of 30% of all passengers in the facility. Seating is required so as to avoid obstruction to the flow of passenger traffic through the complex; it should be designed to combine comfort, ease of maintenance and resistance to vandalism.

3. Hardscape and landscaping: It is important to ensure that landscaping complements the spatial design and enhances the visual appeal of the terminal. Outdoor and indoor passenger areas should be smoothly hardscaped, to facilitate easy connection between site's periphery and the terminal.

4. Lighting: Lighting should be designed to meet minimum illumination levels and quality standards for both indoor and outdoor application. Natural lighting elements such as sky lights shall be used to enhance lighting level without increasing the energy load of the terminal facility. Lighting fixtures should be energy efficient, require low maintenance, and minimize light pollution and glare.

V. CONCLUSION

Following conclusion are made from the above study-

1. Redesigning of kalol bus terminal will provide improved and high-tech services to the passengers at the terminal.
2. By redesigning kalol bus terminal can be used for transportation as well as commercial purposes by providing shops, cinemas and other entertainment spaces.

VI. ACKNOWLEDGEMENT

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