

Redesign of Existing Private Bus Terminal at Kothamangalam

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ABSTRACT- Development and growth of the town largely depends on the efficiency of the transportation system with in the town. Kothamangalam consists of two bus terminals. Among these, major traffic flow occurs in private bus terminal and thereby its maintenance is of great importance.

Due to lack of capacity and limited area, expansion of existing bus terminal is not possible. Insufficient entry and exit width, in adequate number of bays adversely affects the functioning of bus terminal.

Further land acquisition is not possible so rather than planning for new design, redesign of existing bus terminal is the only option. Certain modifications must be incorporated in the existing design of the terminal so as to accommodate future expansion and congestion simultaneously.

1. INTRODUCTION

Kothamangalam is situated in the foothills of Western Ghats mountain ranges, around 85 kilometers from hill station Munnar. Kothamangalam is also known as "GATEWAY OF HIGH RANGE". Due to rush of pilgrims and tourists, Kothamangalam is plagued by traffic congestion. Kothamangalam consists of two bus terminals. Among these, major traffic flow occurs in private bus terminal and thereby its maintenance is of great importance.

GENERAL

Lack of terminal facilities causes congestion within the Kothamangalam private bus terminal. Due to lack of capacity and limited area, expansion of existing bus terminal is not possible. Uncontrolled flow of pedestrian and vehicular traffic also supplements adversity to the congestion caused by buses. Due to limited land availability, modification is the only solution. A functional bus system is an essential element of intra city public transport system

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OBJECTIVES

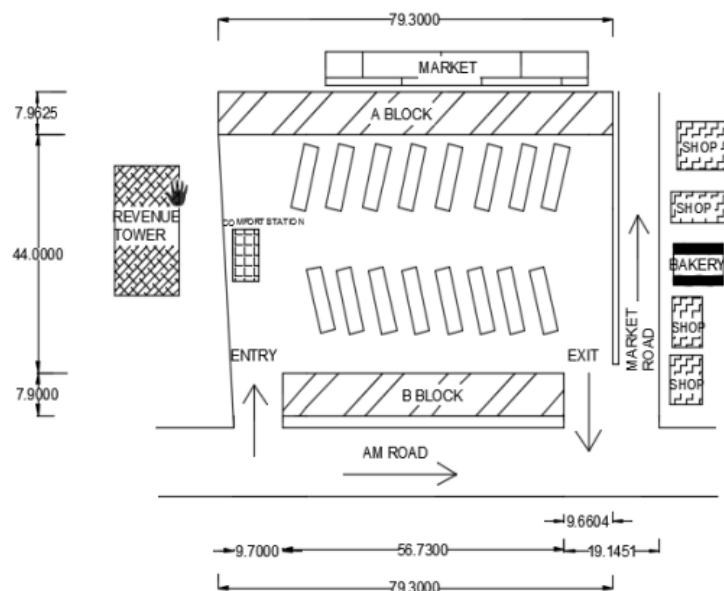
The project is aimed at

- Studying the present scenario of Kothamangalam bus terminal.
- Redesigning of the existing terminal.

SCOPE OF THE PROJECT

The scope of the project lies in establishing an efficient and well occupied bus terminal at Kothamangalam. Development and growth of the town largely depends on the efficiency of the transportation system with in the town. Due to limited land availability, modification is the only solution. A functional bus system is an essential element of intra city public transport system

PLAN OF THE EXISTING PRIVATE BUS TERMINAL AT KOTHAMANGALAM



- Total Area:-4600 m²
- Entry Width:-9.7m
- Exit Width:-9.66 m
- No. Of Bays:-16
- Clearance B/W A Block & B Block:-44 m

ADJACENT STRUCTURES WITH DIMENSION

- A Block Area :- 631m²
- B Block Area:- 448 m²
- Comfort Station :- 12.5m x 20m
- Market Road Width :- 9 m

CONCLUSION FROM THE TRAFFIC SURVEY:-

The peak hour traffic volume was estimated as 89 veh/hr during the morning hours, 9:00 am to 10:00 am and 91 veh/hr during the afternoon hours 4:00 pm to 5:00 pm. An average traffic volume of 65veh/hr was estimated. So, the further design in the terminal should be such that it can accommodate this peak hour volume by reducing the traffic congestion and delays.

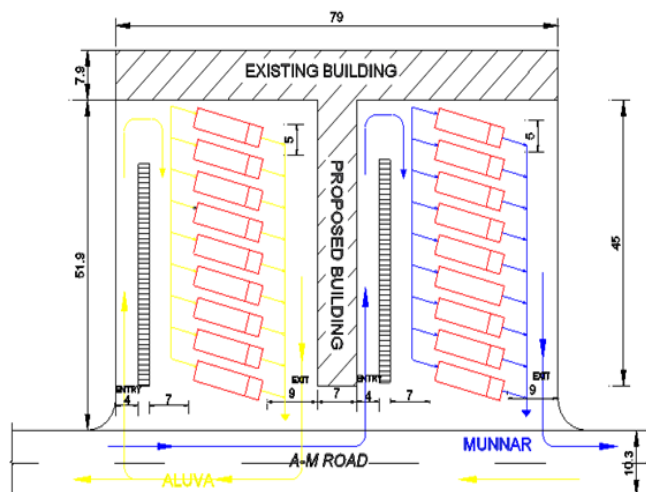
NEED FOR A NEW BUS TERMINAL

There are certain issues persisting in the present bus terminal which is summarized as below:

- Insufficient entry and exit width
- Adequacy of segregation of present parking facilities
- Need for proper utilization of space available
- Inadequate number of bays
- Need for suitable turning space availability
- Inadequate waiting area
- Further land acquisition is not possible

After cross examining all the above mentioned problems rather than planning for a new design, redesign of the terminal is the best option. Certain modifications need to be incorporated in the existing design of the terminal so as to accommodate future expansion and congestion simultaneously.

PLANNING AND DESIGN OF NEW TERMINAL



The proposed plan basically consists of 18 bus bays each of width 5m. In order to reduce the present congestion at the exit and entrance, the proposed plan comprises of two entries as well as two exits. The parking space available for each bus is provided as 14m. Angle parking at 60° is provided. The width provided for entry is 13m and that for exit is 9m. The proposed terminal building consist of two waiting areas of width 1.8 m each and ground floor with 6 shops (5.75m x 3m).

The 1st and 2nd floors are designed for commercial purposes. Ground and second floor possesses an identical plan which consists of facilities for 6 shops. First floor plan comprises of 5 shops and toilet facilities have been provided for men and women. It has been designed in such a way, First floor similar to that of the ground floor has six shops and 4 toilets (1.42m x 3m). Second floor is exactly similar to that of ground floor, so as to create minimum rush in the passages. The vertical transportation of people is carried out by means of stair which is provided on one of the corners. The road entry width is provided as 14 m wide and is designed in such a way that the bus traffic and shopping complex visitors do not affect each other.

CONCLUSION

We have successfully completed the project and thereby concluded that the proposed terminal is the best alternative to solve the existing issues associated with the present terminal to a great extent. The planning of the new terminal was done in such a way that it provides more comfort to the passengers and other customers visiting the shopping complex. Moreover, a better segregated parking facility as well as comfortable bus movement within the terminal has been provided.

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