

A Study on Infrastructure Issues of the Mall at Manali using Public Opinion

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Abstract—Manali, a very well-known tourist destination is known for its lush green landscape and scenic beauty of nature. It is located at a distance of 38 kilometers north from the Kullu town. This paper focuses on the identification of state of social and economic infrastructure on urban street namely The Mall at Manali by conducting the physical surveys and using the existing land use map of the town. The paper highlights the related infrastructure problems in the street also suggests the solutions to the identified problems.

1. INTRODUCTION

Manali is snow peaked hill station which is famous tourist destination well known for its natural beauty, adventure sports, health benefits and historical importance. The mall road is the main street of Manali. It is known for street shopping, recreational activities like horse riding, fun activities for kids and food shops that ranges from informal fast food corners to wholesome meals. The place is therefore the main attraction of the town Manali. Lined with neatly maintained shops on both sides of the street the area is pedestrianized with siting spaces and benches provided at regular intervals for relaxation. The street becomes alive during the evening and night hours, as most of the tourists prefer to visit during this time.



Figure 1: The location of The Mall Road in Manali
(Source: Goole Maps 2018)

2. CLIMATE OF MANALI

The town Manali falls under the important tourist destination of Kullu valley. It has dominant winter months from October to April, the Kullu valley has an excellent climate. The summer season from March to June is pleasant with temperature not rising beyond 35°C, which results in attracting many tourist from the plains of the country and beyond. Rainy season is from July to September, having moderate rainfall and in winter season there is snowfall during January and February. Temperature falls down to 1° C in lower areas whereas it goes down to sub zero limits in the upper parts of the valley that includes Manali [2].

The climate of Manali is, therefore, termed as 'climate of recreation' as it is comfortable and pleasing in summer. Ideal weather comfort can be enjoyed at the heights ranging from 1200 metres to 1800 metres. At altitude more than 1800 metres, winters are not that tolerable as that of the rest of the year. Manali experiences more than one metre snowfall during winter. Average rainfall at Manali goes up to 127 cm during the rainy season primarily in the months of July and August [2].

3. EXISTING SCENARIO

Survey of the area helped in study of land use planning of the area which showed the categorization of built masses as shown in Figure 2.

The natural slope of the area is toward southern side. Eastern side is valley facing & the axis of mall road is oriented along north – south direction. Most of the structures/buildings are made with burnt brick and are plastered followed by structure made with exposed brick masonry and stone masonry structures. Due to heavy influx of tourists the area has seen some emerging urban issues regarding social infrastructures. These have been identified as under.

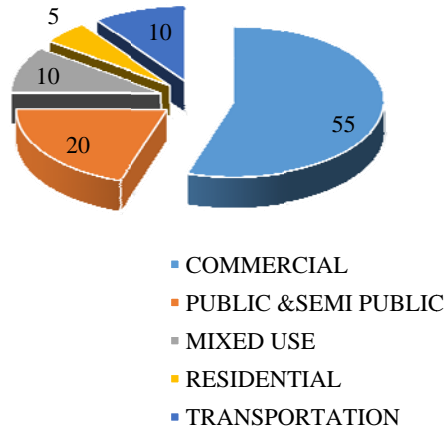


Figure 2. Categorization of built masses

The mall road has diverse activities and accordingly a number of different types of spaces are there as follows:

Commercial spaces: they include buildings like hotels, shops, showrooms, restraunts etc. and it constitutes nearly 60% of total buildings.

Public spaces: these type of buildings include hospitals, government buildings, office, bus-stand, taxi stand, post office tec. It constitutes nearly 15% of total land use.

Residential spaces: these comprise of houses with varying number of floors ranging from ground floor houses to three storied houses. It constitutes nearly 6% of total land use.

Institutional buildings: these mainly comprise of school buildings and these are categorized under public buildings.

Parking spaces: these are the space used for parking of private and government vehicles and these are categorized under public buildings.

Mixed use: These are the buildings which have multiple type of user in them which ranges from part use of building as residence and part used as hotel or commercial complex or shop. It constitutes nearly 10% of total land use of the area.

The lanuse breakup is shown in Figure 3.

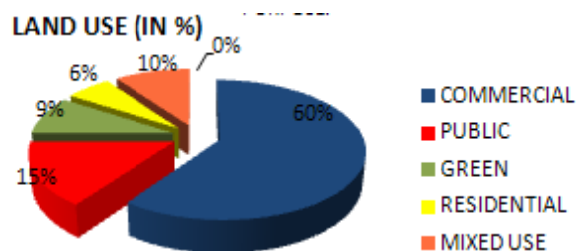


Figure 3: Landuse pattern in The mall, Manali

4. URBAN PROBLEMS IDENTIFIED

Different aspects of Physical, Social and Economic infrastructure have been studied and analyzed for problems using the existing landuse map [1] and based upon the guidelines given at [3] and recommendation of [4], the solutions have been suggested.



Figure 4: Informal sitting space at The mall road, Manali

Physical infrastructure

Different urban design problems especially in category of physical infrastructure were identified. Finally, their proposed solutions are also mentioned as under:

- Drainage:** nearly 10% drains are covered in the area. Rest are uncovered or semi-covered and also there is lack of maintenance. Moreover, no sewerage connection is there, trapping of solid waste creates problems.

Solution: proper sewerage connections or septic tanks to be provided and drains should be covered cleaned and maintained



Figure 5: Open drains and trapped solid waste in drains

2. Solid waste management: people are neither aware nor have proper facility for disposal of solid waste.

Solution: in addition to provision of dustbins people are required to be made aware about the same.

3. Parking: insufficient parking space, no proper road network and heavy vehicular traffic which leads to accidents.

Solution: provide a new multilevel parking to fulfill all needs, making one way road from tic towards taxi stand, one way traffic will have no congestions and jams.

4. Water supply: water pipes running through drains at some places-great health threat

Solution: water pipes should be running through drains, they must be properly planned and maintained

5. Pedestrian facilities: Problems for students while crossing road to go to school, problem while crossing the road (at chowk).

Solution: provided an overhead bridge at a will act as a landmark and iconic piece providing a pedestrianized bridge but also will mark start and end to mall road

6. Signage: no sufficient signage has been provided

Solution: proper signage boards shall be provided at the junctions and along the road to facilitate ease of accessibility.

Social infrastructure

1. Educational: schools are near to a density vehicular zone, -not safe for children in terms of traffic, no buffer zones, congested and noisy area.

Solution: making one way traffic flow, planting Asoka trees and creating boundaries with shrubs, use of proposed foot over bridge.

2. Medicine and health: lesser bad capacity in terms of floating population, problem for ambulance movement, no dispensary.

Solution: a proposed dispensary and chemists in place of the existing bus terminal, making one way traffic for ambulance movement.

3. Community spaces: only school playground, small unorganized parking in the mall, pedestrianized but haphazard mall.

Solution: developing clubs, seating, parks in the mall, multi-use of spaces, proposed, iconic gathering and foot over bridge

4. Public toilets: hidden location, away from mall, temple, not adequate as per the floating population, located at the rear side of commercial zone.

Solution: proposed toilet for public in the place of bus terminal, near to the mall, near to the temple.

5. Seating spaces: very rare or no provision in the mall, improper anthropometry, waste of space.

Solution: improve existing areas, seating above hawkers, along the mall with the dividers

6. Religious: congestion in terms of population, due to the adjacent bus terminal, surrounded by open drains on each sides, depletes air quality

Solution: shifting the bus stand to aloo ground, covering the drains.

Economic infrastructure and environmental issues:

1. Trade and commerce: parking is a big issue, which is not enough for the present number of vehicles. Also, there is no provision of dedicated space provided for the hawkers as has been suggested by Urban and Regional Development Plans Formulation and Implementation (URDPFI), 2014 Guidelines [3].

Solutions: developing existing site of bus terminal as a multi-level parking which has capacity of more than 300 cars, proposed shaded area for hawkers with seating above.

2. Business: because of demand, quality of service is decreased, no parking facility in most of the hotels.

Solutions: such rules and regulations should be there for the hotels, which can have control over the guilty and service.

3. Government services: number of banks and ATMs are not sufficient to serve the tourists.

Solutions: some new branches or service counters should be introduced in the area.

4. Tourism: available taxi stand does not fulfil the requirement of parking for the taxies, the bus terminal is insufficient to serve the increasing number of tourists.

Solution: taxi-stand should be developed as 2-3 levelled parking space dedicated for taxies only, the bus terminal should be shifted to some other site which can fulfil the requirements

5. Environmental analysis: rain shelters are not provided, lack of view points.

Solutions: rain shelters should be built on mall road and seating spaces too, view-points should be developed

5. DISCUSSION

The survey for the area was conducted and physical infrastructure and social infrastructure was studied using the existing land use map. Different urban design problems especially in category of physical infrastructure were identified using the methodology as explained in [3]. It has been found that due to increase in population of inhabitants, workers and tourists, the demand for social and economic infrastructure and lack of existing infrastructure has resulted in the problems mentioned above.

6. CONCLUSION

Present study involves identifying of problems and their solutions for the mall road Manali using opinion surveys. The approach adopted here is most suited for addressing the urban problems faced by the residents and tourists as well. In this way not only present problems but also future development related problems will be able to get proper channel and solutions and their timely address will help to maintain the beauty of the mall road, Manali. Based upon the study of social infrastructure and environmental issues in relation with the urban issues of the area the mall road, solutions have been proposed to the identified problems in the area. The mall forms the lifeline and the main attraction of the small town which offers multiple activities therefore the issues related with its social infrastructure and environmental issues are important to be dealt with before the area lose its charm owing to these problems.

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